

MARINE PUMPS

By Oberdorfer

A Subsidiary of Thomas Industries Inc.





ENGINE COOLING

BRONZE RUBBER IMPELLER PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

**MODEL
501M
501E**

PIPE SIZE 1 1/4



FEATURES

- n Bronze Construction - Corrosion Resistance
- n Reversible Wearplate
- n Teflon Barrier Seals Protecting Ball Bearings
- n Mechanical Carbon Ring, Ceramic Face Main Pump Seal
- n Two Sealed Ball Bearings Spaced for Maximum Load Ability
- n Large Vent & Drain Openings Separate Seal & Bearing Areas
- n Shaft Slinger for Additional Bearing Protection
- n New 368J Impeller Compound
- n High Chrome Nickel Stainless Steel Shaft
- n O-Ring Seal Between Body and Cover
- n Impeller & Cam Easily Replaced

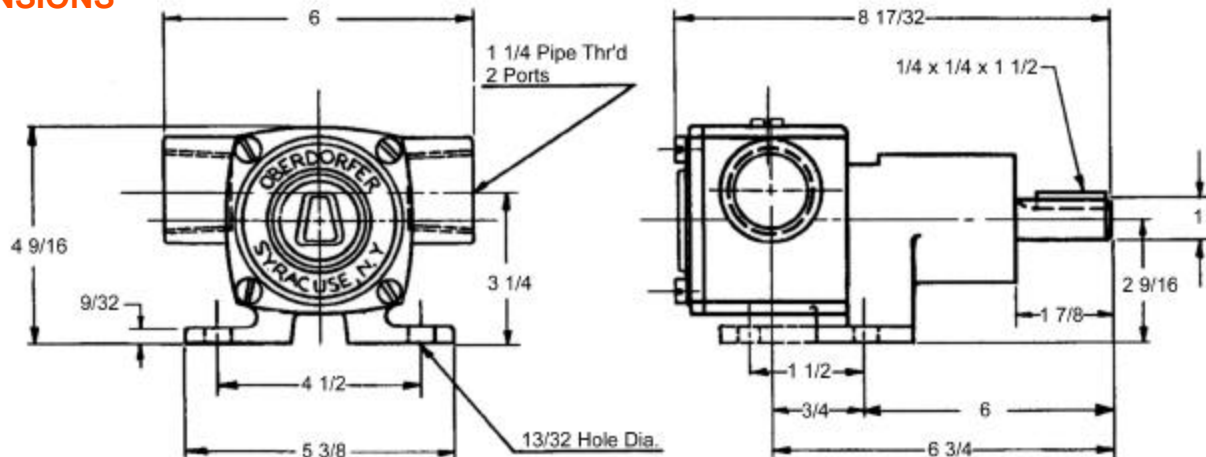
ROTATION

Direction of shaft rotation determines inlet and outlet ports (see line drawing)

MOUNTING

Pump will operate satisfactorily when mounted in any position. **DO NOT RUN DRY**. Rubber impellers generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up.

DIMENSIONS



PERFORMANCE

Capacity Water at 60° F

Pump Model	RPM	Feet Hd.	0	20	40	60	80
		PSI	0	8.7	17.3	26.0	34.6
501M	800	GPM	28.0	26.0	22.0	16.0	10.0
		HP	3/4	3/4	3/4	1	1
	1150	GPM	38.0	36.0	30.0	25.0	13.0
		HP	3/4	3/4	1	1 1/2	1 1/2
1750	GPM	58.0	55.0	49.0	41.0	32.0	
	HP	1 1/2	1 1/2	1 1/2	2	3	

GPM = Gallons per minute

RPM = Revolutions per minute

PSI = Pounds per square in pressure

Feet Hd.= Feet head pressure

HP = Horsepower

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using pulley, do not overtighten belt.

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage.

Extremes of cold and heat will affect impeller life. Limits of 40 ° to 140° F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permagard, Dowgard.

SUCTION LIFT

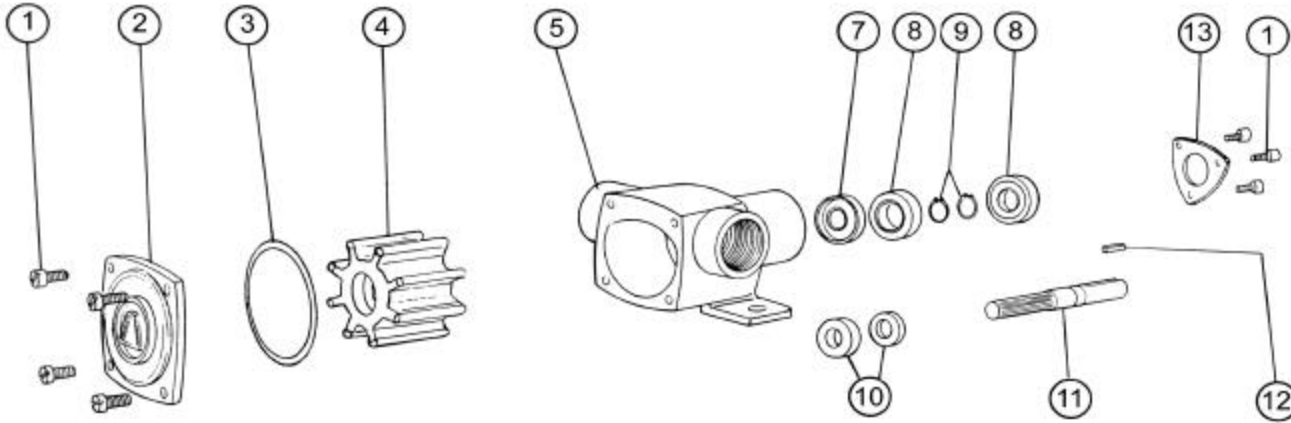
Suction lift of 15 feet is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. A foot valve at beginning of suction line is recommended.

**MODEL
501M
501E**

BRONZE RUBBER IMPELLER PUMP

OBERDORFER PUMPS
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EXPLODED VIEW AND PARTS LIST

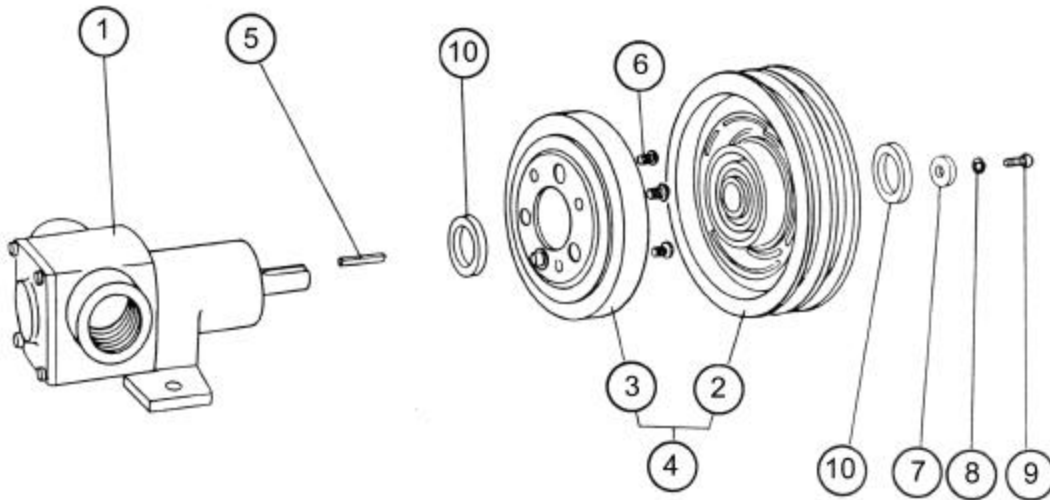


Pump No.	1	2	3	4	5	6	7 ¹	8	9	10	11	12	13
	Screw	Cover	O-Ring	Impeller	Body	Set Screw	Lip Seal	Ball Bearing	Ret. Ring	Seal Assy.	Shaft	Key	End Plate
	7 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	2 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
501M-05	5504	6717	8232	7054	9932	6436	6710	6332	6559	32953	9930	6342	6713
501M-06	5504	6717	8232	7593	9932	6436	6710	6332	6559	32953	9930	6342	6713

Repair Kit for 501M-05 is 10706. It contains items 3, 4 & 14.

¹Item 7 is not shown.

Repair Kit for 501M-06 is 11672. It contains items 3, 4 & 14.



Pump No.	1**	2	3	4*	5	6	7	8	9	10	Clutch Kit #
	Pump	Clutch Body	Coil	Clutch Assy	Key	Screw	Washer	Lock Washer	Screw	Spacer	
	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	3 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	
501-05E12	501M-05	7227	7224	32238	6711	6437	6663	5016	7735	9946	10717
501-05E32	501M-05	7227	7225	32239	6711	6437	6663	5016	7735	9946	10856
501-06E12	501M-06	7227	7224	32238	6711	6437	6663	5016	7735	6715	10717
501-06E32	501M-06	7227	7225	32239	6711	6437	6663	5016	7735	6715	10856

* Item 4 Clutch Assy. Is items 2 & 3 combined.

** Item 1 is pump listed above with item 20 (End Plate) w/ (3) 5504 screws removed.

E 12 models are 12 Volt D.C., E 32 models are for 32 Volt D.C.

Clutch Kits contain items 2, 3, 5, 6, 7, 8, 9 & 10.

BRONZE PEDESTAL RUBBER IMPELLER PUMP

MODEL
401M



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE 1"



FEATURES

- n Bronze Construction - Corrosion Resistance
- n Large Suction and Discharge Ports
- n Teflon(R)* Barrier Seals Protecting Ball Bearings
- n Mechanical Carbon Ring, Ceramic Face Main Pump Seal Standard
- n Two Sealed Ball Bearings Spaced for Maximum Load Ability
- n Large Vent & Drain Openings Separate Seal & Bearing Areas
- n Shaft Slinger for Additional Bearing Protection
- n Neoprene Impeller Standard,
Buna N Impeller Optional (Both are Spline Drive)
- n High Chrome Nickel Stainless Steel Shaft
- n Extra Capacity Ball Bearings plus Rugged Construction for Prolonged Service Life
- n Impeller & Cam Easily Replaced
- n Buna N O-ring Between Body and Cover Eliminates Gasket Problems

ROTATION

Direction of shaft rotation determines inlet and outlet ports (see line drawing)

MOUNTING

Pump will operate satisfactorily when mounted in any position. **DO NOT RUN DRY**. Rubber impeller pumps generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up.

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using pulley, do not overtighten belt.

PERFORMANCE

Capacity Water at 60°F

Pump Model	RPM	Feet Hd.					
		0	20	40	60	80	
401M-02	800	PSI	0	8.7	17.3	26.0	34.6
		GPM	12.0	11.0	9.70	7.5	2
	1750	HP	1/3	1/3	1/2	1/2	3/4
		GPM	25.0	24.0	22.2	19.1	15
401M-03	2500	HP	3/4	3/4	3/4	1	1
		GPM	32.5	30.5	27.0	24.0	17.5
	3000	HP	1	1 1/2	1 1/2	2	2
		GPM	36.0	34.5	31.0	27.5	21
		HP	1 1/2	1 1/2	1 1/2	2	2

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage. Buna N impellers can handle oil contaminated water and kerosene at reduced impeller service life.

Extremes of cold and heat will affect impeller life. Limits of 40° to 140° F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permagard, Dowgard.

SUCTION LIFT

Suction lift of 15 feet is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. A foot valve at beginning of suction line is recommended.

IMPELLER REPLACEMENT

The impeller must be replaced if it is worn out or has been damaged by debris or by running the pump dry. Symptoms of a defective impeller are low pumping pressure and low flow causing overheating of the boat engine. Poor pump performance can also be caused by slippage of V-belts, so belts should be checked for tightness.

To replace the impeller remove screws and cover cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

(continued on back)

*Teflon(R) is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

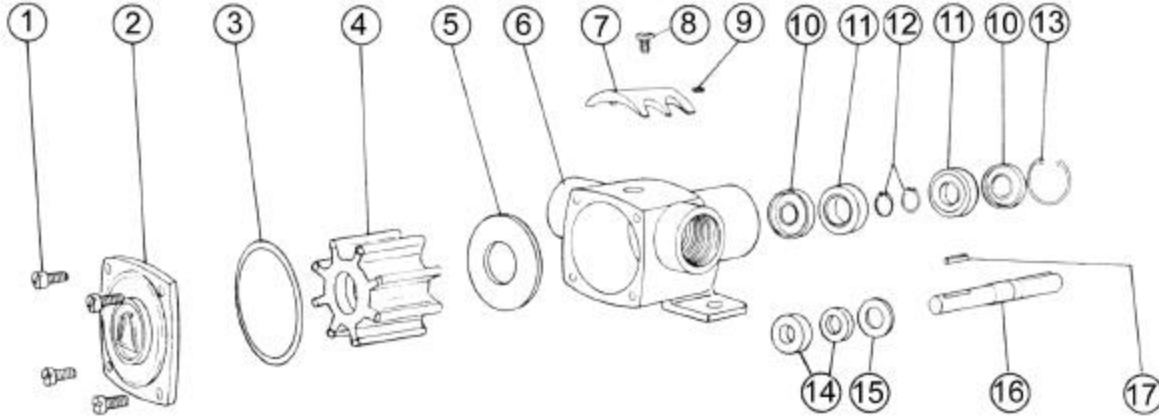
**MODEL
401M**

BRONZE PEDESTAL RUBBER IMPELLER PUMP



OBERDORFER PUMPS
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EXPLODED VIEW AND PARTS LIST

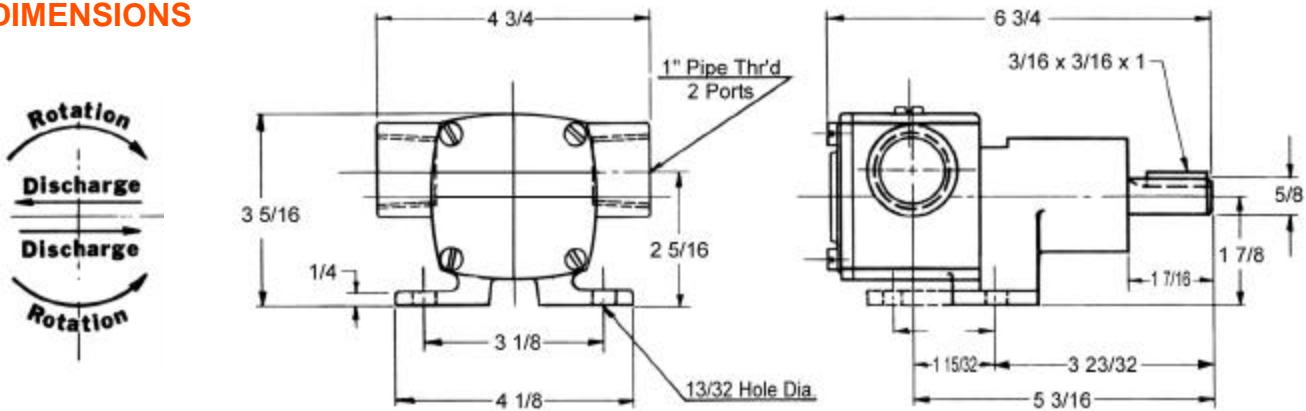


Pump No.	1	2	3 ¹	4 ¹	5	6	7	8	9	10	11	12	13	14 ¹	15	16	17	Repair Kit ¹
	Screw	Cover	O-Ring	Impeller	Wear Plate	Body	Cam	Screw	Pin	Lip Seal	Ball Bearing	Snap Ring	Snap Ring	Mech/Lip Seal	Washer	Shaft	Key Exter.	
	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	1 Reqd	2 Reqd	2 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	
401M-02	5504	6625	8230	7441	6635	6624	6606	7300-62	6685	6609	5928	5926	5925	33230	6631	7170	6567	10907
401M-03	5504	6625	8230	7466	6635	6624	6606	7300-62	6685	6609	5928	5926	5925	33230	6631	7170	6567	11237

¹ Repair Kits contain items 3, 4, & 14.

Pump	Impeller
401M-02	Neoprene
401M-03	Buna N

DIMENSIONS



SEAL REPLACEMENT (Continued from front)

If water drips from the weep hole or from the area where the shaft exits the pump, the seal is defective and must be replaced. While the Teflon(R)* barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings resulting in catastrophic pump failure and engine shut-down.

For seal replacement, the pump must be removed from the engine and disassembled in order to gain access to the seal area.

Where mechanical seals are used, both components (stationary and rotating member) must be replaced at the same time. Lip seals must be pushed out of their press-fitted position and new seals pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.

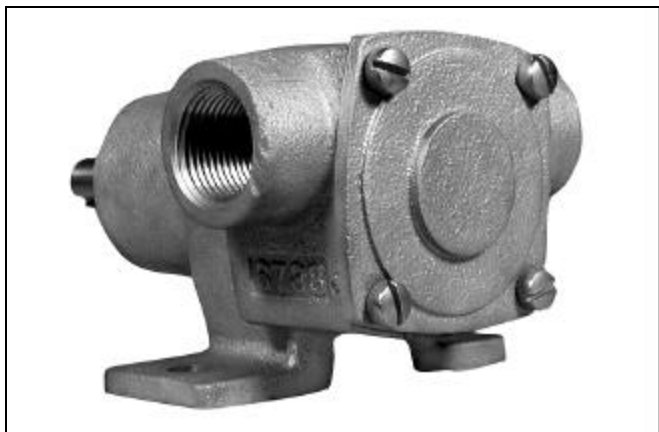
BRONZE PEDESTAL RUBBER IMPELLER PUMP

MODEL
301M



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE: 3/4"



FEATURES

- n Bronze Construction - Corrosion Resistance
- n Large Suction and Discharge Ports
- n Teflon(R)* Barrier Seals Protecting Ball Bearings
- n Mechanical Carbon Ring, Ceramic Face Main Pump Seal Standard, Optional Buna N Lip Seal
- n Two Sealed Ball Bearings Spaced for Maximum Load Ability
- n Large Vent & Drain Openings Separate Seal & Bearing Areas
- n Shaft Slinger for Additional Bearing Protection
- n Neoprene Impeller Standard, Buna N Impeller Optional
- n High Chrome Nickel Stainless Steel Shaft
- n Extra Capacity Ball Bearings plus Rugged Construction for Prolonged Service Life
- n Impeller & Cam Easily Replaced
- n Buna N O-ring Between Body and Cover Eliminates Gasket Problems

ROTATION

Direction of shaft rotation determines inlet and outlet ports (see line drawing)

MOUNTING

Pump will operate satisfactorily when mounted in any position. **DO NOT RUN DRY**. Rubber impeller pumps generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up.

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using pulley, do not overtighten belt.

PERFORMANCE

Capacity Water at 60°F

Pump Model	RPM	Feet Hd. PSI	0	20	40	60	80
			0	8.7	17.3	26.0	34.6
301M	800	GPM	5.3	4.2	2.50	---	---
		HP	1/4	1/4	1/4	---	---
	1750	GPM	12.0	10.5	9.2	6.7	3
		HP	1/3	1/3	1/2	1/2	1/2
	2500	GPM	16.0	14.5	12.5	9.3	6
		HP	1/2	1/2	3/4	3/4	3/4
3000	GPM	19.0	17.8	15.5	12.7	9.3	
	HP	3/4	3/4	3/4	3/4	3/4	
3450	GPM	20.5	19.5	18.8	17.5	12.5	
	HP	3/4	3/4	1	1	1	

GPM = Gallons Per Minute
RPM = Revolutions Per Minute
PSI = Lbs. Per Square Inch Pressure
Feet Hd = Feet Head Pressure
HP = Horsepower

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage. Buna N impellers can handle oil contaminated water and kerosene at reduced impeller service life.

Extremes of cold and heat will affect impeller life. Limits of 40° to 140° F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permguard, Dowgard.

SUCTION LIFT

Suction lift of 15 feet is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. A foot valve at beginning of suction line is recommended.

IMPELLER REPLACEMENT

The impeller must be replaced if it is worn out or has been damaged by debris or by running the pump dry. Symptoms of a defective impeller are low pumping pressure and low flow causing overheating of the boat engine. Poor pump performance can also be caused by slippage of V-belts, so belts should be checked for tightness.

To replace the impeller remove screws and cover cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

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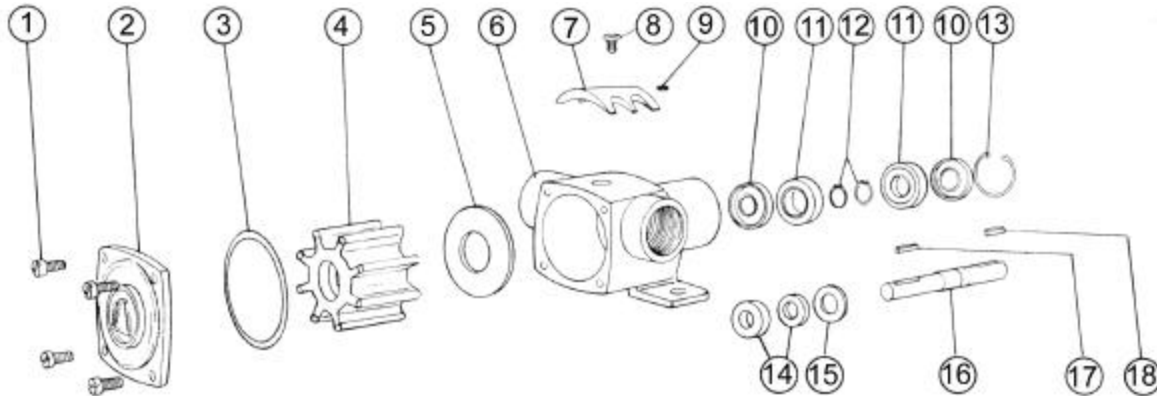
**MODEL
301M**

BRONZE PEDESTAL RUBBER IMPELLER PUMP



OBERDORFER PUMPS
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EXPLODED VIEW AND PARTS LIST

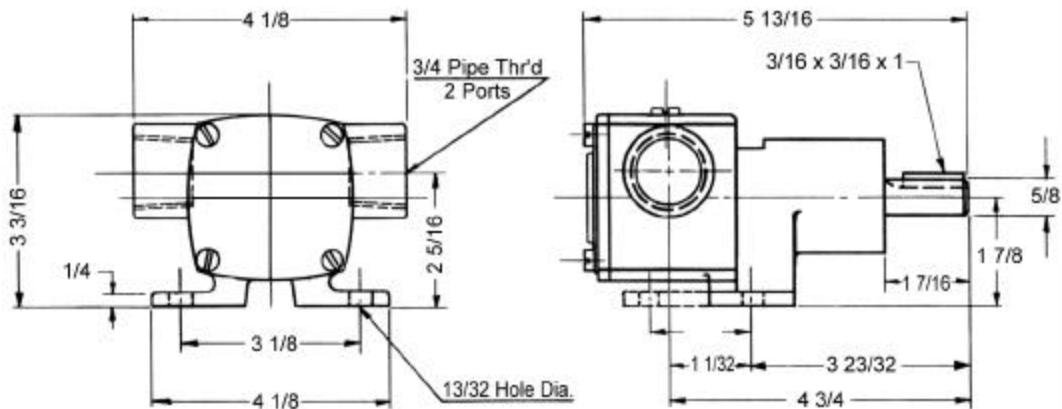
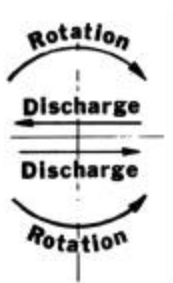


Pump No.	1	2	3 ¹	4 ¹	5	6	7	8	9	10	11	12	13	14 ¹	15	16	17	18	Repair Kit ¹
	Screw	Cover	O-Ring	Impeller	Wear Plate	Body	Cam	Screw	Pin	Lip Seal	Ball Bearing	Snap Ring	Snap Ring	Mech/Lip Seal	Washer	Shaft	Key Intern.	Key Exter.	
	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	1 Reqd	2 Reqd	2 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	
301M	5504	6736	8231	6620	6737	6738	6612	7300-62	6685	6609	5928	5926	5925	32230	6631	6747	6739	6567	10704
301M-01	5504	6736	8231	6620	6737	6738	6612	7300-62	6685	6609	5928	5926	5925	5463	6631	6747	6739	6567	12188
301M-04	5504	6736	8231	8647	6737	6738	6612	7300-62	6685	6609	5928	5926	5925	32230	6631	6747	6739	6567	12187

¹ Repair Kits contain items 3, 4, & 14.

Pump	Impeller	Seal
301M	Neoprene	Buna N Mechanical
301M-01	Neoprene	Buna N Lip Seal
301M-04	Buna N	Buna N Mechanical

DIMENSIONS



SEAL REPLACEMENT (Continued from front)

If water drips from the weep hole or from the area where the shaft exits the pump, the seal is defective and must be replaced. While the Teflon(R)* barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings resulting in catastrophic pump failure and engine shut-down.

For seal replacement, the pump must be removed from the engine and disassembled in order to gain access to the seal area.

Where mechanical seals are used, both components (stationary and rotating member) must be replaced at the same time. Lip seals must be pushed out of their press-fitted position and new seals pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.

BRONZE PEDESTAL RUBBER IMPELLER PUMP

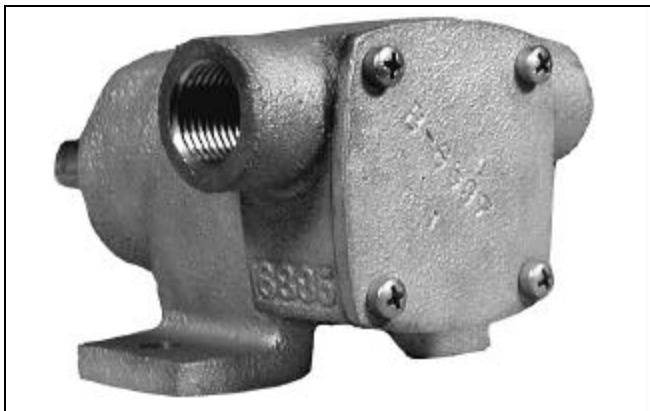
MODEL
201M



OBERDORFER PUMPS

A Subsidiary of Thomas Industries Inc.

PIPE SIZE 1/2"



FEATURES

- n Bronze Construction - Corrosion Resistance
- n Large Suction and Discharge Ports
- n Teflon(R)* Barrier Seals Protecting Ball Bearings
- n Mechanical Carbon Ring, Ceramic Face Main Pump Seal Standard, Optional Buna N Lip Seal
- n Two Sealed Ball Bearings Spaced for Maximum Load Ability
- n Large Vent & Drain Openings Separate Seal & Bearing Areas
- n Shaft Slinger for Additional Bearing Protection
- n Neoprene Impeller Standard, Buna N Impeller Optional
- n High Chrome Nickel Stainless Steel Shaft
- n Extra Capacity Ball Bearings plus Rugged Construction for Prolonged Service Life
- n Impeller & Cam Easily Replaced

ROTATION

Direction of shaft rotation determines inlet and outlet ports (see line drawing)

MOUNTING

Pump will operate satisfactorily when mounted in any position. **DO NOT RUN DRY**. Rubber impeller pumps generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up.

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using pulley, do not overtighten belt.

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped

PERFORMANCE

Capacity Water at 60° F

Pump Model	RPM	Feet Hd. PSI	0	20	40	60	80
201M	800	GPM	2.6	1.8	0.62	---	---
		HP	1/6	1/6	1/6	---	---
	1750	GPM	6.0	4.8	2.6	---	---
		HP	1/4	1/4	1/4	---	---
	2500	GPM	8.7	6.9	4.0	0.2	---
		HP	1/3	1/3	1/3	1/3	---
	3000	GPM	10.3	8.4	5.7	1.3	---
		HP	1/3	1/3	1/3	1/3	---
	3450	GPM	11.3	9.6	6.8	2.6	---
		HP	1/3	1/2	1/2	1/2	---

GPM = Gallons Per Minute

RPM = Revolutions Per Minute

PSI = Lbs. Per Square Inch Pressure

Feet Hd = Feet Head Pressure

HP = Horsepower

including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage. Buna N impellers can handle oil contaminated water and kerosene at reduced impeller service life.

Extremes of cold and heat will affect impeller life. Limits of 40° to 140° F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permagard, Dowgard.

SUCTION LIFT

Suction lift of 15 feet is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. A foot valve at beginning of suction line is recommended.

IMPELLER REPLACEMENT

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To replace the impeller remove screws and cover cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

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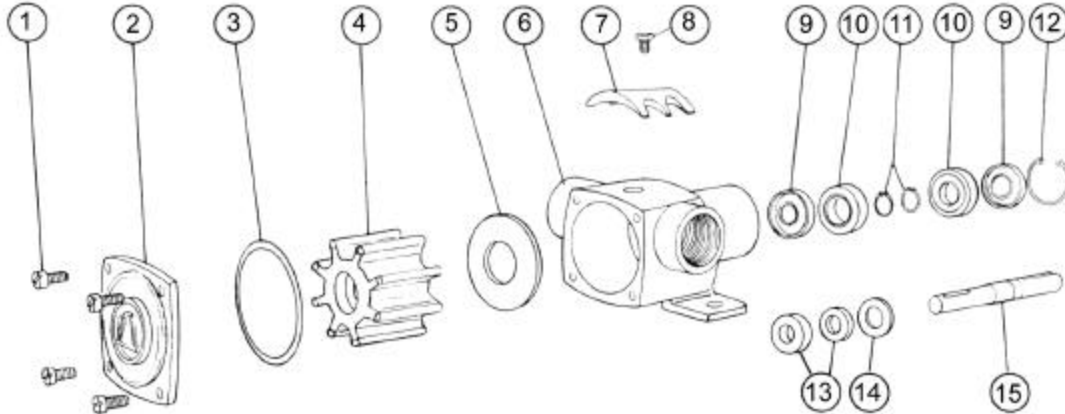
**MODEL
201M**

BRONZE PEDESTAL RUBBER IMPELLER PUMP



OBERDORFER PUMPS
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EXPLODED VIEW AND PARTS LIST

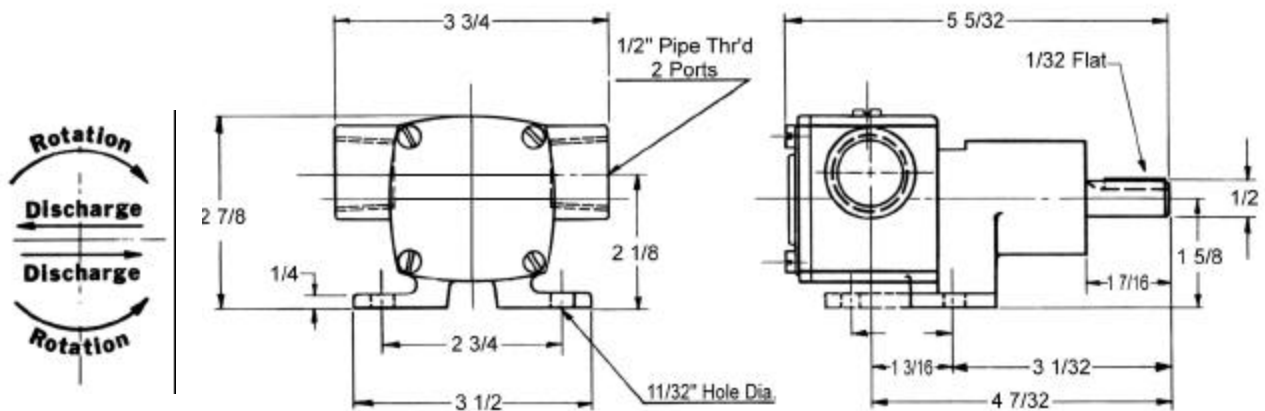


Pump No.	1	2	3 ¹	4 ¹	5	6	7	8	9	10	11	12	13 ¹	14	15	Repair Kit ¹
	Screw	Cover	Gasket	Impeller	Wear Plate	Body	Cam	Screw	Seal Bearing	Ball Bearing	Snap Ring	Snap Ring	Mech/Lip Seal	Washer	Shaft	
	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	2 Reqd	1 Reqd	1 Reqd	1 Reqd	
201M	5385	6597	7547	6593	6929	6885	6592	7300-41	6609	5928	5926	5925	32230	6631	6886	10832
201M-01	5385	6597	7547	6593	6929	6885	6592	7300-41	6609	5928	5926	5925	5463	6631	6886	12124
201M-05	5385	6597	7547	8514	6929	6885	6592	7300-41	6609	5928	5926	5925	5463	6631	6886	12186

¹ Repair Kit contains items 3, 4, & 13.

Pump	Seal	Impeller
201M	Buna N Mechanical	Neoprene
201M-01	Buna N Lipseal	Neoprene
201M-05	Buna N Lipseal	Buna N

DIMENSIONS



SEAL REPLACEMENT

If water drips from the weep hole or from the area where the shaft exits the pump, the seal is defective and must be replaced. While the Teflon(R)* barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings resulting in catastrophic pump failure and engine shut-down.

For seal replacement, the pump must be removed from the engine and disassembled in order to gain access to the seal area.

Where mechanical seals are used, both components (stationary and rotating member) must be replaced at the same time. Lip seals must be pushed out of their press-fitted position and new seals pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.



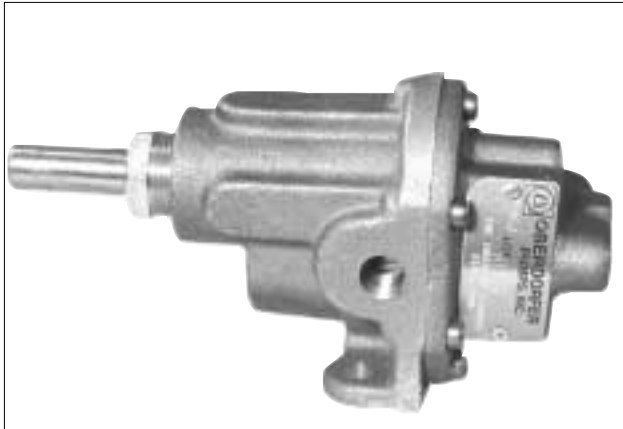
OIL CHANGE

BRONZE PEDESTAL ROTARY GEAR PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

**MODEL
N1000
SERIES**

MODEL N1000- 1/4" NPT PORTS STANDARD



MODEL N1000R



FEATURES

- Bronze Corrosion Resistant Castings
- Special Cast Bronze Gears
- Stainless Steel Shafts & Fasteners
- Formed Ring Seal Packing (Lip & Mechanical Seals on Special Order)
- Heavy Duty Carbon Bearings (Self Lubricating)
- Positive Displacement Flow

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. Make sure both flexible coupling halves are properly aligned. When using a pulley, do not overtighten the belt. Also, to absorb belt side thrust at higher pressures and larger size pumps, an external ball bearing support is recommended -- consult factory.

LIQUIDS AND TEMPERATURE

Service life will be increased substantially if the liquid pumped is clean and has some degree of lubricity. These positive displacement pumps have tight tolerances. Fine abrasives like sand, silt, or powders in suspension will accelerate pump wear and reduce throughput.

Liquids compatible with bronze and stainless steel can be pumped providing proper seal has been specified (see chemical compatibility or check factory). When possible, flush the pump after each usage.

Temperature extremes are detrimental to service life and should be avoided. Basic metals of construction allow a temperature range of -40 to 400°F. Some lip and mechanical seal elastomers have a limit of 212°F. (see engineering data or check factory). Allowing a liquid to freeze in the pump can cause damage.

SUCTION LIFT

Close tolerances and the positive pumping action make the rotary gear pump capable of lifting water on the suction side as high as 20 feet. Though gear pumps are self priming, a foot valve is recommended. If possible, wet the gears with liquid to be pumped for the first dry start. Liquid retained in the system and gear chambers serves to "wet" the pump on subsequent starts.

CAPACITY - WATER 70°F

R.P.M.	FT. HD P.S.I.	0	46	92	138	184	231	290	346
		0	20	40	60	80	100	125*	150*
400	G.P.M.	0.50	0.30	0.10	---	---	---	---	---
	H.P.	0.01	0.03	0.04	---	---	---	---	---
	MOTOR	1/6	1/6	1/6	---	---	---	---	---
600	G.P.M.	0.80	0.62	0.44	0.27	0.10	---	---	---
	H.P.	0.02	0.04	0.06	0.08	0.10	---	---	---
	MOTOR	1/6	1/6	1/6	1/6	1/6	---	---	---
800	G.P.M.	1.03	0.87	0.72	0.56	0.40	0.24	0.10	---
	H.P.	0.02	0.04	0.07	0.10	0.12	0.15	0.18	---
	MOTOR	1/6	1/6	1/6	1/6	1/6	1/6	1/4	---
1000	G.P.M.	1.26	1.11	0.96	0.81	0.66	0.51	0.33	0.10
	H.P.	0.02	0.05	0.09	0.12	0.15	0.19	0.24	0.28
	MOTOR	1/6	1/6	1/6	1/6	1/6	1/4	1/4	1/3
1200	G.P.M.	1.50	1.35	1.20	1.05	0.90	0.75	0.60	0.45
	H.P.	0.03	0.05	0.12	0.14	0.17	0.21	0.26	0.29
	MOTOR	1/6	1/6	1/6	1/6	1/4	1/4	1/3	1/3
1600	G.P.M.	1.95	1.83	1.70	1.57	1.45	1.32	1.15	0.95
	H.P.	0.04	0.08	0.13	0.18	0.22	0.27	0.33	0.38
	MOTOR	1/6	1/6	1/6	1/4	1/4	1/3	1/3	1/2
1725	G.P.M.	2.10	1.98	1.86	1.74	1.62	1.50	1.35	1.20
	H.P.	0.05	0.09	0.14	0.19	0.23	0.28	0.34	0.39
	MOTOR	1/6	1/6	1/6	1/4	1/4	1/3	1/3	1/2

H.P. = Actual Horsepower

G.P.M. = Gallons per Minute

R.P.M. = Revolutions per Min.

Motor = Convenient Fractional Size

P.S.I. = Lbs. Per Square Inch Pressure

Ft. Hd. = Equiv. Press. in Ft of Water

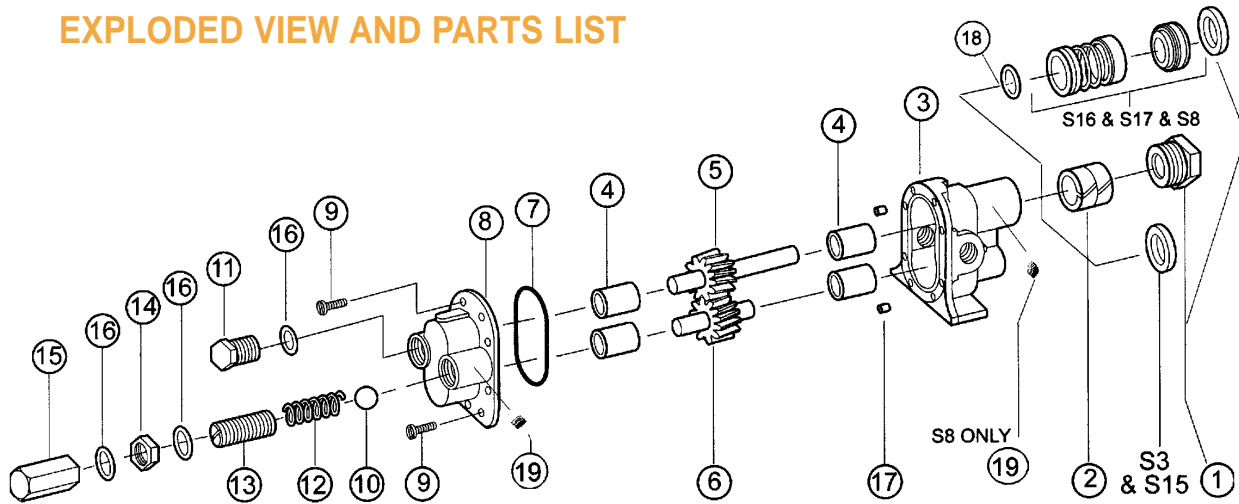
*For pressures over 100 psi, the above selections are suitable for pumping fluids with lubricity (e.g. oils, polymers). Service life will decrease for fluids without lubricity (e.g. water, solvents).

MODEL N1000 SERIES

BRONZE PEDESTAL ROTARY GEAR PUMPS



EXPLODED VIEW AND PARTS LIST



Pump No	Seal Arrangement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Repair Kit	
		Packnut or Retaining Ring	Packing	Seal	Body	Bearing	Drive Gear Assy	Idle Gear Assy	O-ring	Cover	Screw	Ball	Plug Nut	Spring	Adj. Screw	Locknut	Bypass Nut	Fiber Washer	Dowel Pin	Retaining Ring	Pipe Plug	
		1 req'd	2 req'd	1 req'd	1 req'd	4 req'd	1 req'd	1 req'd	1 req'd	1 req'd	7 req'd	1 req'd	1 req'd	1 req'd	1 req'd	1 req'd	1 req'd	3 req'd	2 req'd	1 req'd	1 req'd	
N1000	Packing	1892	5481	N/A	9311NB1N	5024	32978	32979	9797-033	9314NN5N	5385								8885			10635
N1000S3	Buna Lip	NA	N/A	5007	9311NB2N	5024	32978	32979	9797-033	9314NN5N	5385								8885			11266
N1000S5	Viton Lip	NA	N/A	7580	9311NB2N	5024	32978	32979	9797-033	9314NN5N	5385								8885			11396
N1000S16	Buna Bellows Mech.	7639	N/A	32584	9370NB4N	5024	32988	32979	9797-033	9314NN5N	5385								8885	5373		11925
N1000S17	Viton Bellows Mech.	7639	N/A	32585	9370NB4N	5024	32988	32979	9797-033	9314NN5N	5385								8885	5373		12104
N1000S8	Teflon Wedge Mech.	7639	N/A	32335	9370NB6N	5024	32988	32979	9355-033	9314NN5N	5385								8885	5373	6052	11283
Relief Valve Versions: N1000R, N1000RS3, N1000RS5, N1000RS16, N1000RS17, N1000RS8									9314NN5B		5809	5775	5806	5766	5774	5767	6966				6052	

All Repair Kits contain items 2,4,5,6 and 7

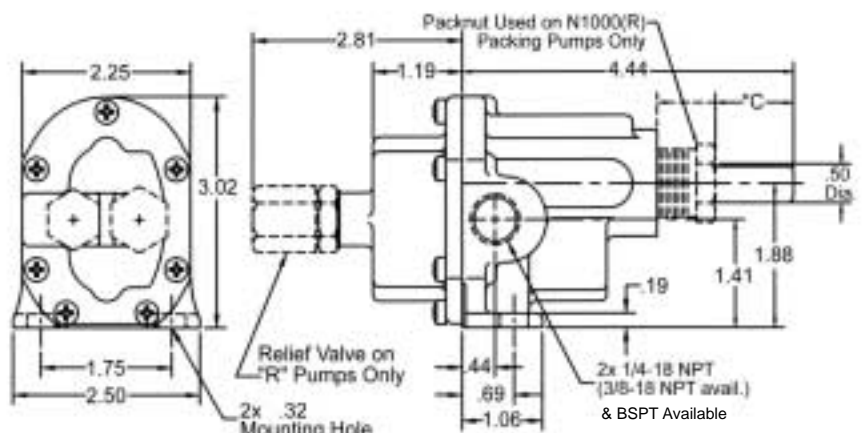
DIMENSIONS

BY-PASS AND ROTATION

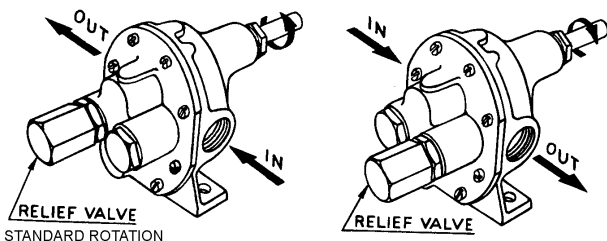
The pump by-pass is not intended to be a metering or flow control device. Its main purpose is to function as a pressure relief when the desired set point is exceeded, overheating can occur within 5 - 10 minutes if the discharge line is completely shut off for extended periods.

Reversing rotation reverses the "IN" and "OUT" ports and the location of the by-pass ports have to be reversed.

The by-pass valve is factory set at 50 p.s.i. To increase the setpoint, turn the by-pass valve adjusting screw in a clockwise direction.



*C Dim: 1.03 for Packing Pumps, 1.18 for S3 & S5 Lip Seals, 1.51 for S16 & S17 Mech. Seals
1.32 for S8 Mechanical Seals



* Viton® or equivalent FKM will be used. Viton® is a registered trademark of DuPont Dow Elastomers.
Teflon® or equivalent PTFE will be used. Teflon® is a registered trademark of DuPont.

BRONZE CLOSE COUPLED ROTARY GEAR PUMPS

**MODEL
N992
SERIES**

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

MODEL N992 - 3/8" NPT PORTS STANDARD



Pump	Description
N992	Standard Pump with 3/8" Ports
N992R	Pump with 3/8" Ports & Relief Valve
N992S5	Pump with Viton® lip seal
N992RS5	Pump with Viton® lip seal & Relief Valve

1/2" NPT Ports are available.

FEATURES

- Compact design eases installation and use in limited space areas.
- Construction is bronze and stainless steel wetted components.
- Close tolerance design allows for consistent performance.
- Helical gears for quiet operation.

GENERAL DESCRIPTION

Pump housings and gears are made of top quality bronze, shafts are 303 stainless steel. Bearings are designed of high performance carbon-graphite material selected for wear resistance and long service life.

Gear pumps are positive displacement pumps. Each shaft revolution displaces a definite amount of liquid relatively unaffected by the back pressure in the discharge line. Shaft speed and flow are directly proportional. Recommended pressure limits are 100 PSI for water and non-lubricants, 150 PSI for oil and other lubricants. The maximum shaft speed is 1750 RPM.

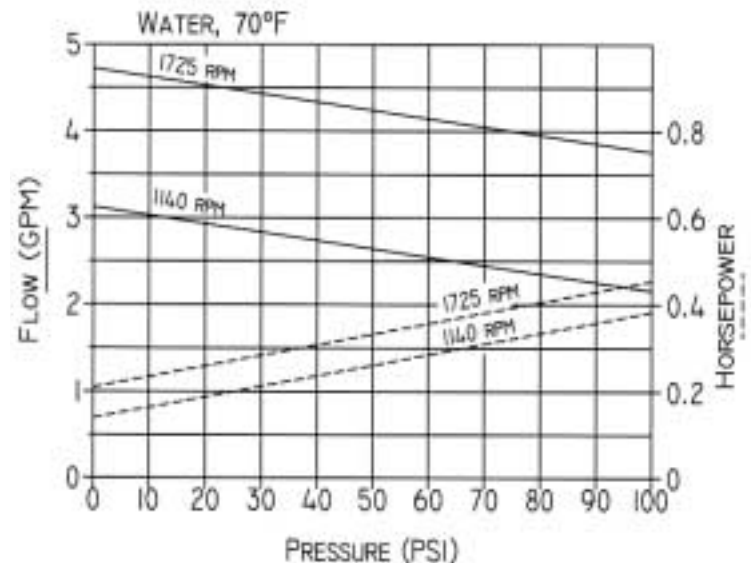
SHAFT SEALS

Close coupled gear pumps are normally supplied with a Buna N lip seal. A lip seal made of Viton® is available as an option. For a Viton® Seal, add S5 to the pump model number.

LIQUIDS AND TEMPERATURE

These pumps are suitable for all liquids that are compatible with bronze. Most common liquids are water, oil, and mild chemicals in the pH range of 4 to 11. Viscous liquids require reduced shaft speeds of 1150 RPM or lower. (Consult factory.)

PERFORMANCE



Liquids containing solids, abrasives, powders, or paint pigments are definitely not recommended for gear pumps. If abrasives are unavoidable, use a very low shaft speed.

The recommended liquid temperature range is from 32° F to 140° F for best pump life. If more extreme temperature conditions exist, factory should be consulted. Freezing of water-filled pumps can cause damage and must be avoided. Oils at low temperatures are very viscous requiring a lower speed or extra power.

SUCTION LIFT

As a general rule, the suction lift should be kept at an absolute minimum by placing the pump as close to the liquid source as possible. A gear pump in new condition can lift 20 feet of water in the suction line. A foot valve (preferably with built-in strainer) is recommended at the beginning of the suction line. For a first start-up, the pump should be primed to avoid dry running. Minimum size of the suction pipe is the size of the pump inlet port. For longer suction lines (over 3 feet) or for viscous liquids, the pipe should be at least one size or two sizes larger than the pump inlet port.

ROTATION AND RELIEF VALVE

If the discharge line contains any throttling devices such as a shut-off valve, a spray nozzle or other restrictive device, it is necessary to have a relief valve in the system which returns the liquid to the suction side or to the tank. The relief valve is also available as part of the pump itself (R-model pumps). However, built-in relief valves are only good for intermittent service. If used continuously, the pump will overheat. A built-in relief valve is strictly a safety device against overpressure. It will not work successfully as a pressure or flow control device. For this purpose a separate relief valve in the pressure line must be used.

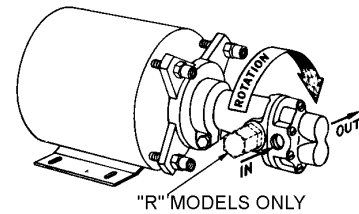
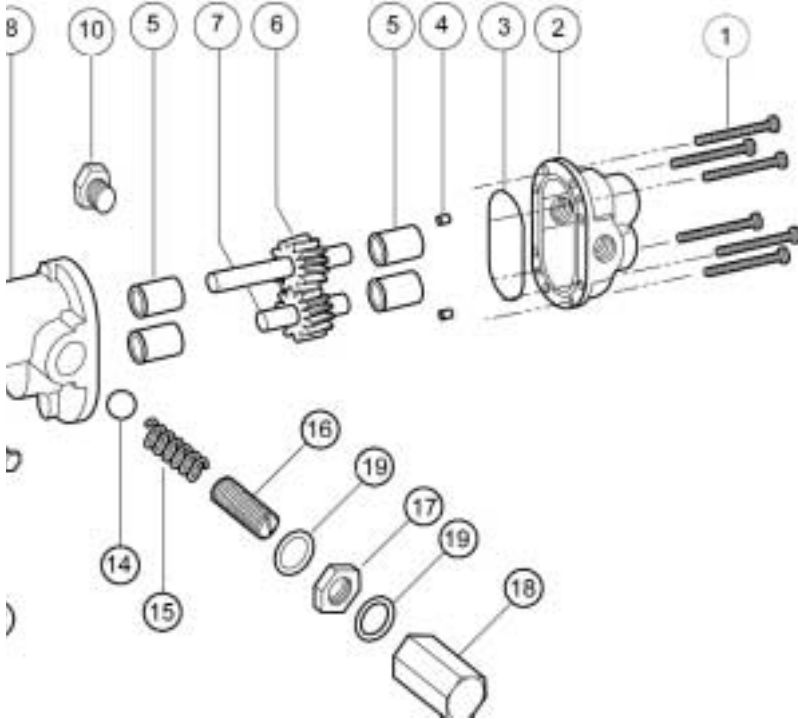
Unless otherwise specified, the pump motor unit is supplied by the factory for shaft rotation counterclockwise from shaft end. Reversing motor will reverse "in" and "out" ports and also requires changing relief valve location. The relief valve is always on the inlet side of this pump series. The factory pressure setting is 50 PSIG. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.

**MODEL
N992
SERIES**

**BRONZE CLOSE COUPLED
ROTARY GEAR PUMPS**

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4	5 ¹	6 ¹	7 ¹	8	9 ^{1,2}	10	11	12	13	14	15	16	17	18	19
	Screw	Body	O-Ring	Dowel Pin	Bearing	Drive Gear Assy.	Idle Gear Assy.	Cover	Lip Seal	Cap Plug	Coupling	Screw	Plug Nut	Ball	Spring	Adj. Screw	Locknut	Bypass Nut	Fiber Washer
	6 Req'd	1 Req'd	1 Req'd	2 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	3 Req'd
N992	5013	9306NC5N	9797-038	8885	5024	32994	32993	9308NN2N	5007	9346	5604	5595	---	---	---	---	---	---	---
N992R	5013	9306NC5N	9797-038	8885	5024	32994	32993	9308NN2B	5007	9346	5604	5595	1838	5238	1840	5237	5240	5239	6533

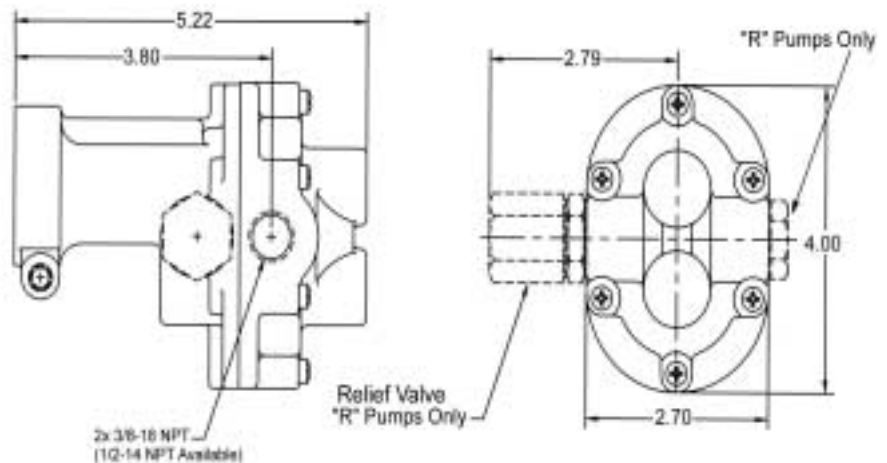
¹Repair Kits contain items 3, 5, 6, 7 & 9. Repair Kit for N992(R) is #10631.

² Seal #5007 is standard Buna N, #7580 is Viton(R)*-Teflon(R)*.

VARIATIONS

DIMENSIONS

Pump No.	9 ^{1,2}	Repair Kit ¹
	Lip Seal	
N992S5	7580	11351
N992RS5	7580	11351



*Viton® or equivalent FKM will be used. Viton® is a registered trademark of DuPont Dow Elastomers.
Teflon® or equivalent PTFE will be used. *Teflon® is a registered trademark of DuPont.

BRONZE CLOSE COUPLED ROTARY GEAR PUMPS

**MODEL
N991
SERIES**

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

MODEL N991 - 1/4" NPT PORTS STANDARD



Pump	Description
N991	Standard pump with 1/4" ports
N991S5	Pump with Viton(R)* lip seal
N991R	Pump with 1/4" ports & relief valve
N991RS5	Pump with Viton(R)* lip seal & relief valve

FEATURES

- Compact design eases installation and use in limited space areas.
- Construction is bronze and stainless steel wetted components.
- Close tolerance design allows for consistent performance.
- Helical gears for quiet operation.

GENERAL DESCRIPTION

Pump housings and gears are made of top quality bronze, shafts are 303 stainless steel. Bearings are designed of high performance carbon-graphite material selected for wear resistance and long service life.

Gear pumps are positive displacement pumps. Each shaft revolution displaces a definite amount of liquid relatively unaffected by the back pressure in the discharge line. Shaft speed and flow are directly proportional. Recommended pressure limits are 100 PSI for water and non-lubricants, 150 PSI for oil and other lubricants. The maximum shaft speed is 1750 RPM.

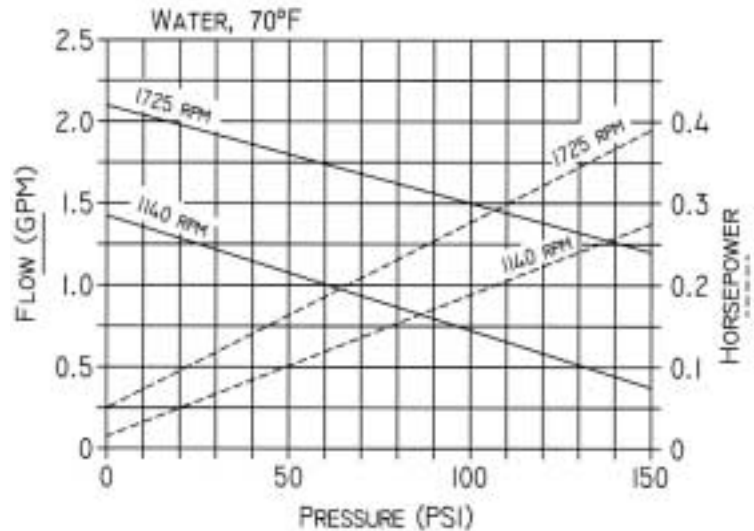
SHAFT SEALS

Close coupled gear pumps are normally supplied with a Buna N lip seal. A lip seal made of Viton(R)* is available as an option. For a Viton(R)* Seal, add S5 to the pump model number.

LIQUIDS AND TEMPERATURE

These pumps are suitable for all liquids that are compatible with bronze. Most common liquids are water, oil, and mild chemicals in the pH range of 4 to 11. Viscous liquids require reduced shaft speeds of 1150 RPM or lower. (Consult factory.)

PERFORMANCE



Liquids containing solids, abrasives, powders, or paint pigments are definitely not recommended for gear pumps. If abrasives are unavoidable, use a very low shaft speed.

The recommended liquid temperature range is from 32° F to 140° F for best pump life. If more extreme temperature conditions exist, factory should be consulted. Freezing of water-filled pumps can cause damage and must be avoided. Oils at low temperatures are very viscous requiring a lower speed or extra power.

SUCTION LIFT

As a general rule, the suction lift should be kept at an absolute minimum by placing the pump as close to the liquid source as possible. A gear pump in new condition can lift 20 feet of water in the suction line. A foot valve (preferably with built-in strainer) is recommended at the beginning of the suction line. For a first start-up, the pump should be primed to avoid dry running. Minimum size of the suction pipe is the size of the pump inlet port. For longer suction lines (over 3 feet) or for viscous liquids, the pipe should be at least one size or two sizes larger than the pump inlet port.

ROTATION AND RELIEF VALVE

If the discharge line contains any throttling devices such as a shut-off valve, a spray nozzle or other restrictive device, it is necessary to have a relief valve in the system which returns the liquid to the suction side or to the tank. The relief valve is also available as part of the pump itself (R-model pumps). However, built-in relief valves are only good for intermittent service. If used continuously, the pump will over-heat. A built-in relief valve is strictly a safety device against overpressure. It will not work successfully as a pressure or flow control device. For this purpose a separate relief valve in the pressure line must be used.

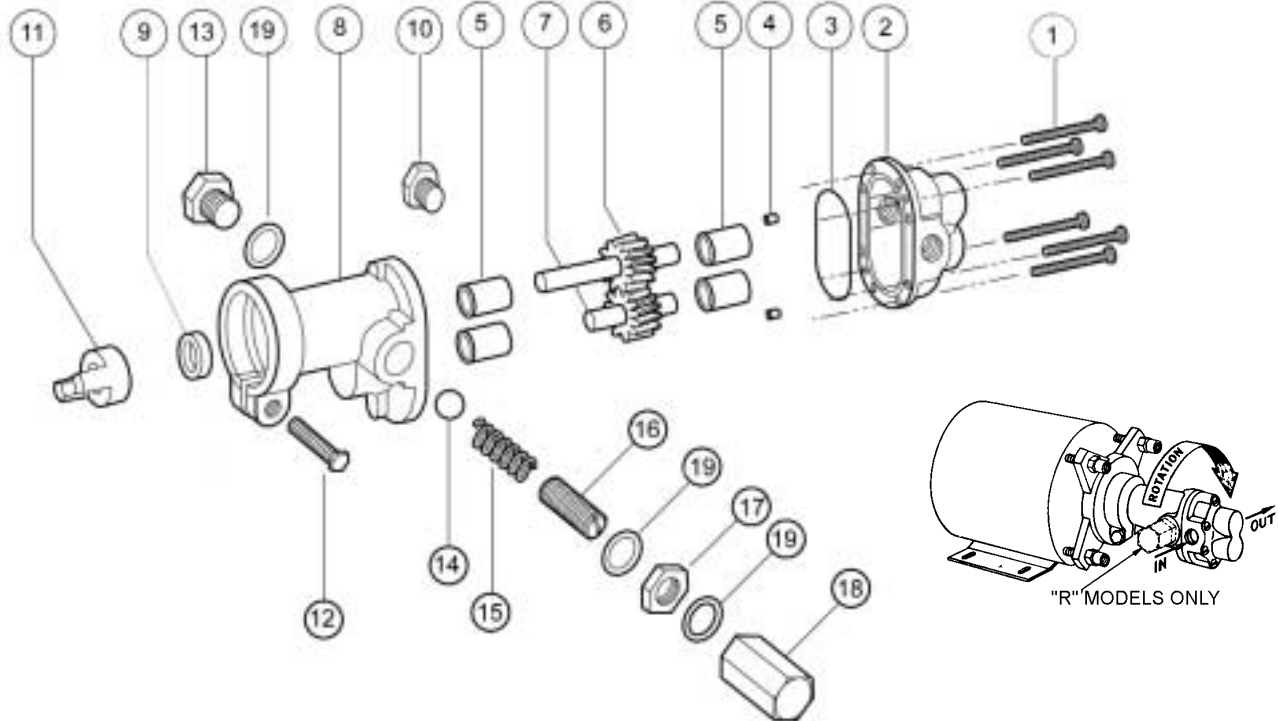
Unless otherwise specified, the pump motor unit is supplied by the factory for shaft rotation counterclockwise from shaft end. Reversing motor will reverse "in and "out" ports and also requires changing relief valve location. The relief valve is always on the inlet side of this pump series. The factory pressure setting is 50 PSIG. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.

**MODEL
N991
SERIES**

**BRONZE CLOSE COUPLED
ROTARY GEAR PUMPS**



EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ²	4	5 ²	6 ²	7 ²	8	9 ^{1,2}	10	11	12	13	14	15	16	17	18	19
	Screw	Body	O-Ring	Dowel Pin	Bearing	Drive Gear Assy.	Idle Gear Assy.	Cover	Lip Seal	Cap Plug	Coupling	Screw	Plug Nut	Ball	Spring	Adj. Screw	Locknut	Bypass Nut	Fiber Washer
	6 Req'd	1 Req'd	1 Req'd	2 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	3 Req'd
N991	5013	9300NB5N	9797-033	8885	5024	32980	32979	9303NN2N	5007	9346	5604	5595	---	---	---	---	---	---	---
N991R	5013	9300NB5N	9797-033	8885	5024	32980	32979	9303NN2B	5007	9346	5604	5595	1838	5803	1840	5237	5240	5239	6533

¹Seal # 5007 is Standard Buna N, # 7580 is Viton(R)*-Teflon(R)*

²Repair Kit contains items 3, 5, 6, 7 & 9. Repair Kit for N991(R) is #10640.

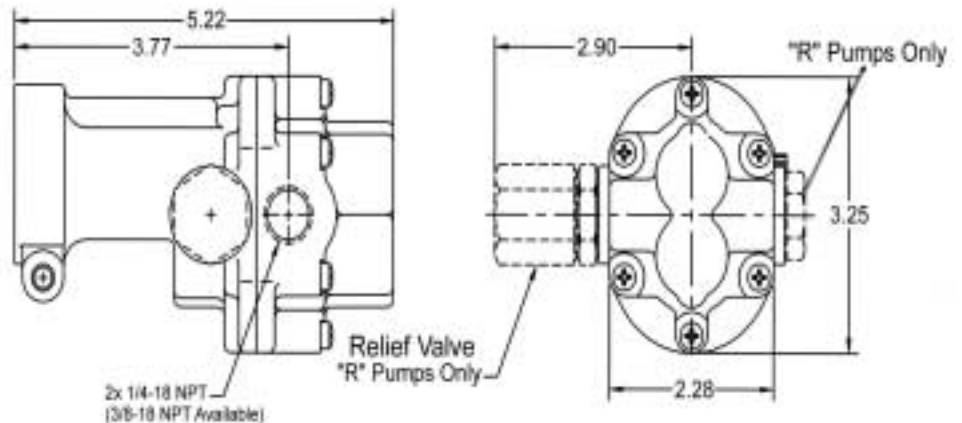
VARIATIONS

Pump No.	g ^{1,2}	
	Lip Seal	Repair Kit ²
N991S5	7580	11318
N991RS5	7580	11318

*Viton® or equivalent FKM will be used. Viton® is a registered trademark of DuPont Dow Elastomers.

*Teflon® or equivalent PTFE will be used. Teflon® is a registered trademark of DuPont.

DIMENSIONS





BILGE GENERAL TRANSFER

www.oberdorfer-pumps.com

1-800-448-1668 or (315) 437-0361

fax (315)463-9561

BRONZE CLOSE COUPLED RUBBER IMPELLER PUMP

MODEL
201D



OBERDORFER PUMPS

A Subsidiary of Thomas Industries Inc.

PIPE SIZE 3/8"



CAPACITY

Water at 60°F

Feet Hd	0	5	10	15	20
PSI	0	2.2	4.3	6.5	8.7
GPM	6	5.3	4.6	3.6	2.5

Extremes of cold and heat will affect impeller life. Limits of 40° to 140° F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permagard, Dowgard.

SUCTION LIFT

Suction lift of 3 ft. is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. A foot valve at the beginning of suction line is recommended.

IMPELLER REPLACEMENT

The impeller must be replaced if it is worn out or has been damaged by debris or by running the pump dry. Symptoms of a defective impeller are low pumping pressure and low flow causing overheating of the boat engine. Poor pump performance can also be caused by slippage of V-belts, so belts should be checked for tightness.

To replace the impeller remove screws and cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

SEAL REPLACEMENT

If water drips from the weep hole or from the area where the shaft exits the pump, the seal is defective and must be replaced. While the Teflon(R)* barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings resulting in catastrophic pump failure and engine shut-down.

For seal replacement, the pump must be removed from the engine and disassembled in order to gain access to the seal area. Where mechanical seals are used, both components (stationary and rotating member) must be replaced at the same time. Lip seals must be pushed out of their press-fitted position and new seals pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.

FEATURES

- Compact Size
- Bronze Construction - Corrosion Resistance
- Buna Seal
- Large Vent Openings Separate Pump & Motor
- Stainless Steel Motor Shaft
- Motor Shaft Slinger Protects Motor Bearings
- Rubber Motor Grommets for Noise Isolation
- Impeller and Cam Easily Replaced
- Garden Hose Threads (External) & Pipe Threads (Internal) for Port Connections
- Available with 12, 24 and 32 volt D.C. Motor Drive

MOUNTING

Horizontal motor mountings - including sidewall mountings - are recommended. The pump can be mounted in any of 4 positions 90° apart. Two screws attach pump to motor.

DRIVE AND ROTATION

Motor drive is clockwise facing pump end. Liquid flow direction is right to left facing pump end. Correct D.C. voltage must be supplied to motor - 12, 24 or 32 volts as specified on motor name plate.

DO NOT RUN DRY

Rubber impellers generate high rubbing friction unless lubricated by the liquid pumped. Lack of liquid will cause impeller to burn up.

LIQUID AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage.

* Teflon(R) is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

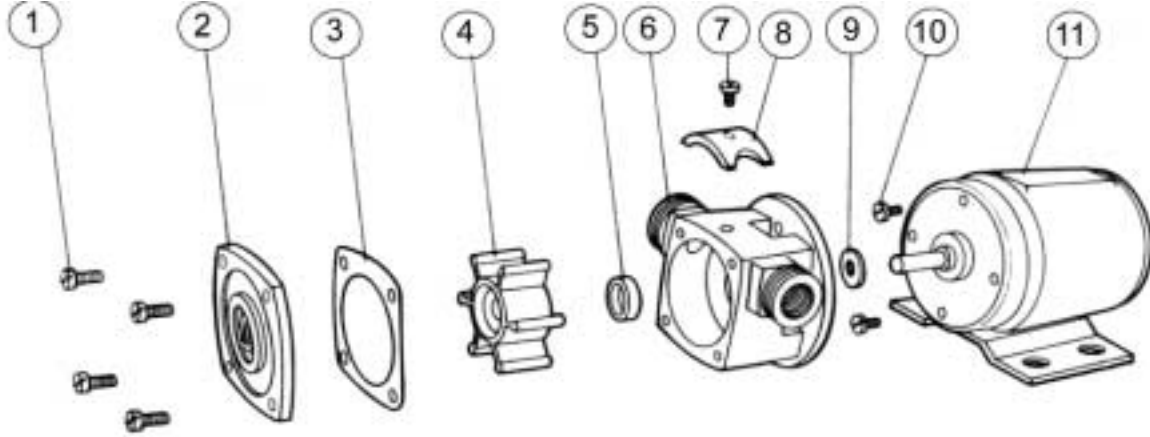
**MODEL
201D**

BRONZE CLOSE COUPLED RUBBER IMPELLER PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODE VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4 ¹	5 ¹	6	7	8	9	10	11	12 ²	Repair Kit ¹
	Screw	Cover	Gasket	Impeller	Lip Seal	Body	Screw	Cam	Slinger	Screw	Motor	Lock Washer	
	2 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	2 Req'd	1 Req'd	2 Req'd	
201D	5385	6597	6654	6617	6647	6639	7300-41	6592	6651	7424	---	5656	10703

¹ Repair kit contains items 3, 4 & 5.

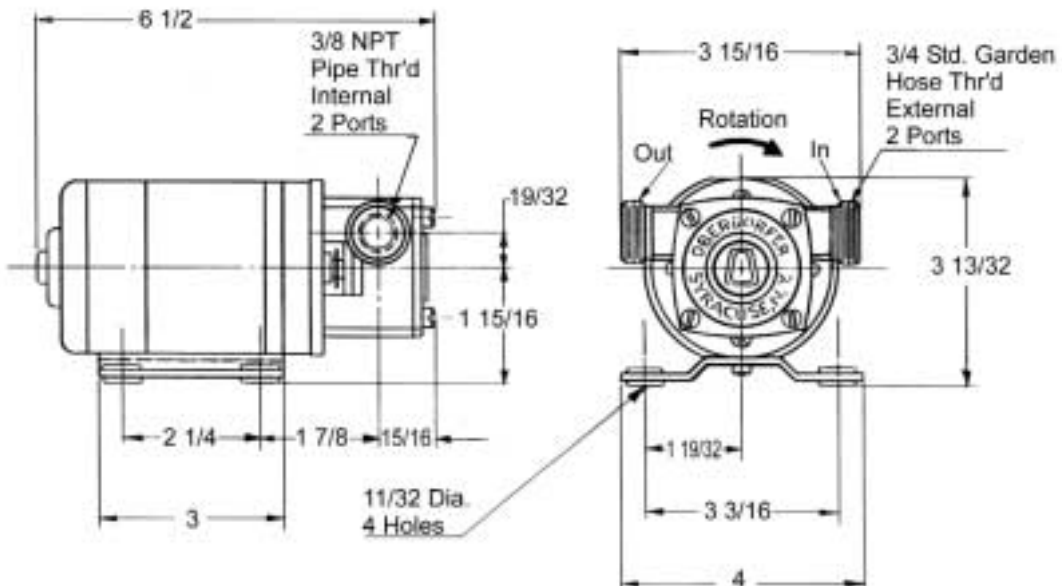
² Not shown.

PUMP & MOTOR OPTIONS

Note: These are the most frequently used pump and motor combinations. If you have other needs, our sales reps can recommend a pump and motor for your application.

Motor	Specification	Part No.
A88	1/10 HP, 2300 RPM, 12 v, Single Phase, TEFC	8029
A89	1/10 HP, 2300 RPM, 24 v, Single Phase, TEFC	8030
A90	1/10 HP, 2300 RPM, 32 v, Single Phase, TEFC	8031

DIMENSIONS



BRONZE CLOSE COUPLED RUBBER IMPELLER PUMP

MODEL
211D

 **OBERDORFER PUMPS**
A Subsidiary of Thomas Industries Inc.

PIPE SIZE: 3/8" ID AND 3/4" OD GARDEN HOSE



FEATURES

- **Bronze construction - corrosion resistant**
- **Garden hose threads (external) & pipe threads (internal) port connections**
- **Impeller & cam easily replaced**
- **Large vent openings separate pump & motor**
- **Motor shafts are stainless steel**
- **Shaft slinger protects motor bearings**
- **Convenient carrying handle**
- **Sealed and grounded 3-conductor plug-in cord**
- **Meets U.S. Coast Guard Ignition Protection Requirements, 33CFR 183.410(a)**

DRIVE AND ROTATION

Motor drive is clockwise facing pump end. Liquid flow direction is right to left facing pump end - see dimension drawing on reverse side. Motor is 1/6 HP, 1725 RPM, 115VAC. O.D.P.

DO NOT RUN DRY

Rubber impellers generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up. Standard impeller in Neoprene (04), optional Buna impeller (05) available.

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions. Do not pump severe solvents or acids. When possible, flush pump with fresh water after each usage.

CAPACITY Water at 60°F

FT. HD.	0	10	20	30	40	50	60
PSI	0	4.3	8.7	13.0	17.3	21.7	26.0
G.P.M.	6 1/2	6 1/4	6	5 1/2	4 3/4	4	2 3/4

Extremes of cold and heat will affect impeller life. Limits of 40°F to 140°F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permanent, Permaguard, Dowgard.

SUCTION LIFT

Suction lift to 15 ft. for model 211D is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. Always use foot valve at beginning of suction line to keep suction line full and impeller wet.

IMPELLER REPLACEMENT

The impeller must be replaced if it is worn out or has been damaged by debris or by running the pump dry. Symptoms of a defective impeller are low pumping pressure and low flow.

To replace the impeller remove screws and cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

SEAL REPLACEMENT

If water drips from the area where the shaft exits the pump, the seal is defective and must be replaced. While the shaft slinger barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings of the electric motor.

For seal replacement, the pump must be removed from the motor and disassembled in order to gain access to the seal area. The Buna seal must be pushed out of the press-fitted position and a new lip seal pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.

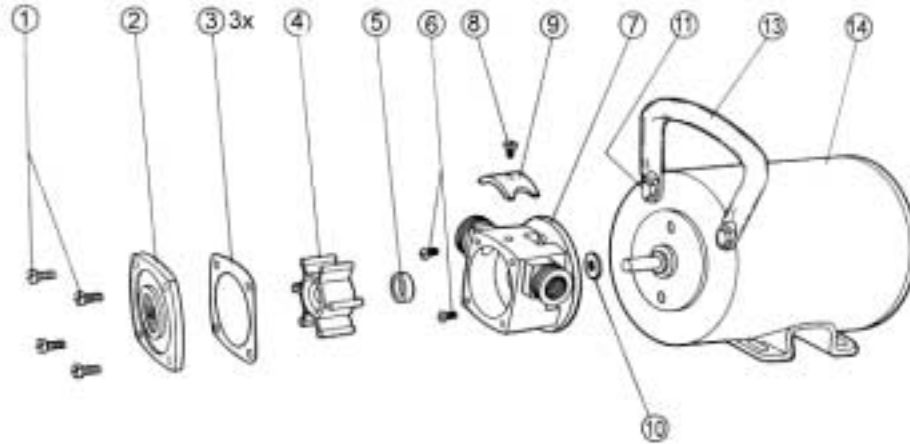
**MODEL
211D**

**BRONZE CLOSE COUPLED
RUBBER IMPELLER PUMP**



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

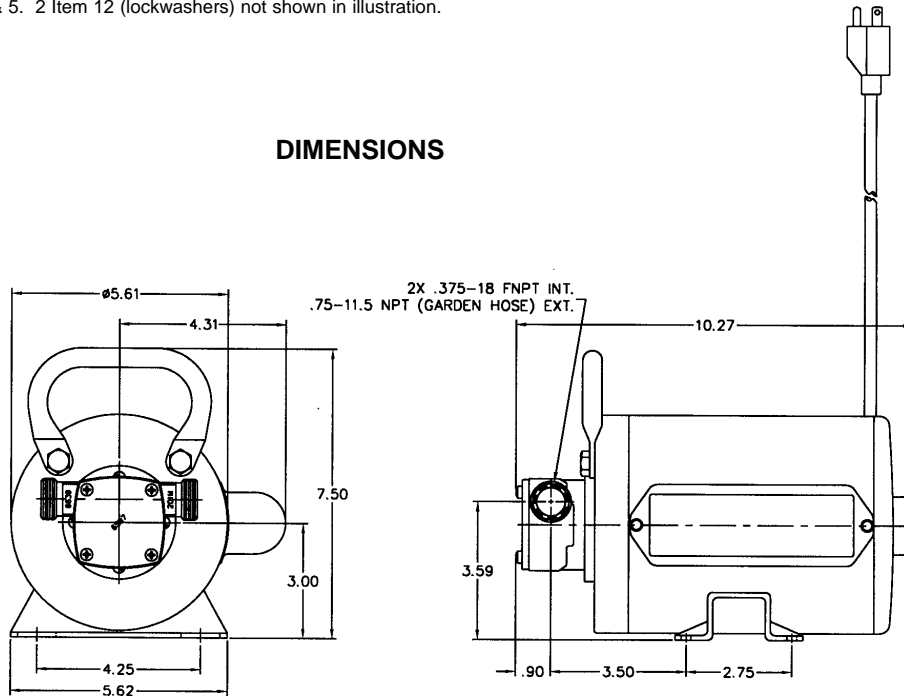
EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4 ¹	5 ¹	6	7	8	9	10	11	12 ²	13	14	Repair Kit ¹
	Screw	Cover	Gasket	Impeller	Lip Seal	Screw	Body	Cam Screw	Cam	Slinger	Screw	Lock Washer	Handle	Motor	
	4 Reqd	1 Reqd	3 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	4 Reqd	1 Reqd	1 Reqd	
211D-04	5385	6597	7547	7482	6647	7424	6639	7300-41	6592	6757	---	---	---	---	10933
211D-04D28	5385	6597	7547	7482	6647	7424	6639	7300-41	6592	6757	5411	5656	7766	8278-01	10933
211D-05D28	5385	6597	7547	8514	6647	7424	6639	7300-41	6592	6757	5411	5656	7766	8278-01	12221

1 Repair Kit contains items 3, 4 & 5. 2 Item 12 (lockwashers) not shown in illustration.

DIMENSIONS



211 D-05, Denotes Buna Impeller P/N 8514

Specifications are subject to change without notice. All motor dimensions are subject to variations among motor manufacturers.

3/2002

BRONZE CLOSE COUPLED RUBBER IMPELLER PUMP

**MODEL
305M**



OBARDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE 3/4" SHOWN W/OUT MOTOR



Model	D.C. Motor Drive	D.C. Voltage
305M-C81	1/4 H.P., 1200 RPM, TEFC, Single Phase	12
305M-02C81		

FEATURES

- Bronze construction
- Reversible wearplate
- Mechanical Carbon Ring, Ceramic face main pump seal
- Portable
- Slotted motor base
- 368J Impeller Compound
- Stainless Steel Shaft
- O-ring seal between body and cover eliminates gasket problems
- Impeller and cam easily replaced

IMPORTANT

Performance is based on full voltage supply. Use direct lines. Do not drain voltage with other electrical equipment on same circuit. Lower voltage reduces performance and overloads motor. Use adequate wires size and length to maintain supply voltage. REcommended wire size and length - #8, 40 ft.; #10, 25 ft.; #12, 16 ft.

MOUNTING

Pump will operate satisfactorily when mounted in any position.

DO NOT RUN DRY

Rubber impellers generate high rubbing friction unless lubricated by liquid pumped. Lack of liquid will cause impeller to burn up.

DRIVE & ROTATION

The pump is driven directly from the electric motor shaft. An aluminum adapter connects the pump to the motor.

CAPACITY - Gallons of Water Per Minute at 60°F

Model	Pressure PSI	0	5	10	15	20*
305M	Flow GPM	8.0	7.8	7.3	5.7	3.4
	12 Volt Amps	9.5	14.8	17.8	18.5	19.7

*Maximum Pressure Recommended - Higher pressures will overload motor. A 25 amp slow-blow fuse is recommended.

Reversing supply leads to motor terminals reverses motor rotation. "In" and "Out" pump ports are also reversed. See diagram on reverse side.

LIQUIDS AND TEMPERATURE

Liquids compatible with neoprene can be pumped including fresh and salt water solutions and mild chemicals. Do not pump severe solvents or acids. When possible flush pump with fresh water after each use.

Extremes of cold and heat will affect impeller life. Limits of 40° to 140°F should be observed. Do not allow liquid in pump to freeze. Drain pump by loosening cover screws. Use methyl alcohol based anti-freeze compounds such as Zerex, Shell Zone, Pyro Permagard, Dowgard.

SUCTION LIFT

Suction lift of 15 ft. is possible when impeller is wet. Suction lines must be air tight in order for pump to self prime. a foot valve at beginning of suction line is recommended.

IMPELLER REPLACEMENT

The impeller must be replaced if it is worn out or has been damaged by debris or by running the pump dry. Symptoms of a defective impeller are low pumping pressure and low flow causing overheating of the boat engine. Poor pump performance can also be caused by slippage of V-belts, so belts should be checked for tightness.

To replace the impeller remove screws and cover. Pull out the impeller with nose pliers or two screwdrivers. Be careful not to dent the pumping chamber with these tools. When inserting new impeller, line up key slot in impeller with the key in the shaft. Use oil on shaft and avoid forcing the impeller onto the shaft.

The impeller should also be removed for storage periods to prevent the blades from taking a permanent set.

SEAL REPLACEMENT

If water drips from the weep hole or from the area where the shaft exits the pump, the seal is defective and must be replaced. While the Teflon(R)* barrier seal provides a first line of defense, prolonged running of the pump with a leaky seal can destroy the ball bearings resulting in catastrophic pump failure and engine shut-down.

For seal replacement, the pump must be removed from the engine and disassembled in order to gain access to the seal area.

(continued on back)

*Teflon(R) is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

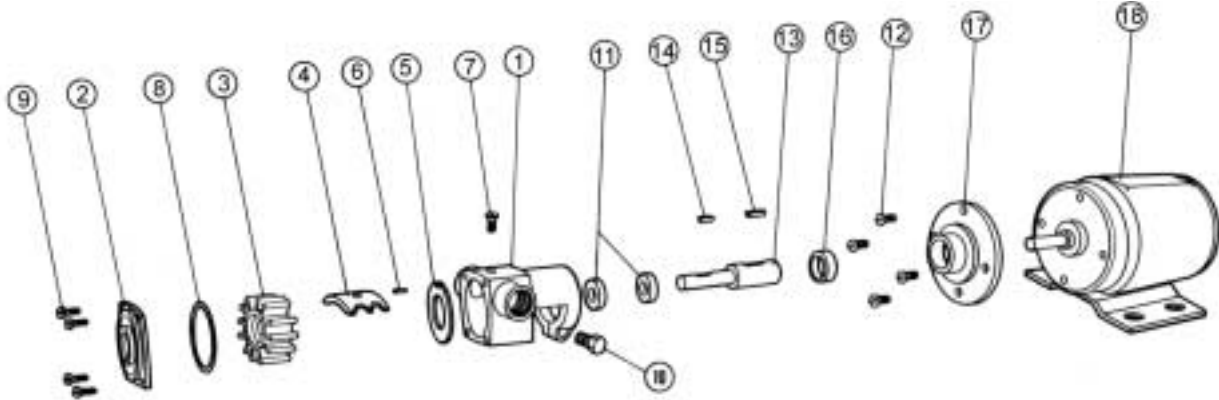
**MODEL
305M**

BRONZE CLOSE COUPLED RUBBER IMPELLER PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

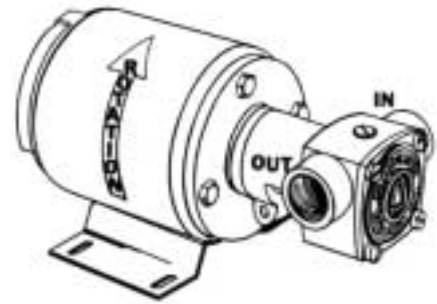
EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4	5	6	7	8 ¹	9	10
	Body	Cover	Impeller	Cam	Wear Plate	Pin	Screw	O-Ring	Screw	Screw
	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd
305M	8318	6736	6620	6612	6737	6685	7300-62	8231	5504	5595
305M-02	8318	6736	8647	6612	6737	6685	7300-62	8231	5504	5595
305M-08	8318	6736	6620	6612	6737	6685	7300-62	8231	5504	5595
305M-C81	8318	6736	6620	6612	6737	6685	7300-62	8231	5504	5595
305M-02C81	8318	6736	8647	6612	6737	6685	7300-62	8231	5504	5595

11 ¹	12	13	14	15	16	17	18	19	Repair Kit ¹
Seal Assy.	Screw	Shaft	Key	Key	Collar	Adapter	Motor	Washer	
1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	
32230	5916	8319	6739	6845	7991	7990	---	6631	10704
32230	5916	8319	6739	6845	7991	7990	---	6631	
32230	5411	8319	6739	6845	7991	7459	---	6631	10704
32230	5916	8319	6739	6845	7991	7990	8295	---	10704
32230	5916	8319	6739	6845	7991	7990	8295	---	

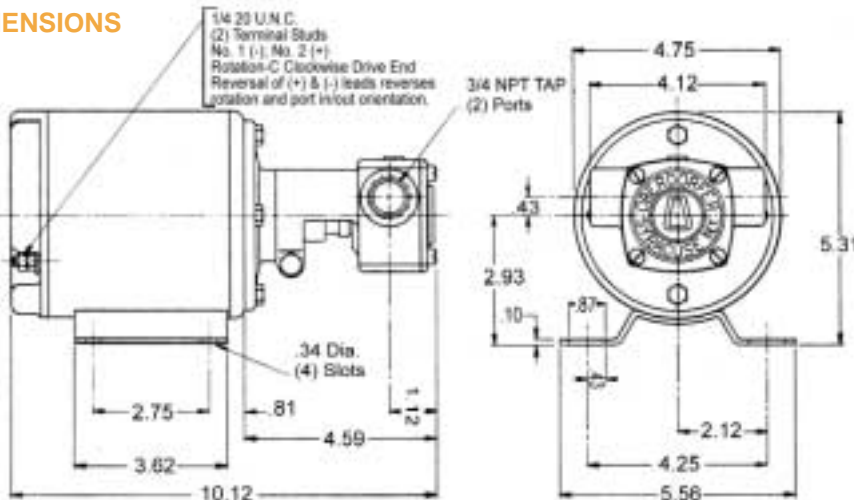
¹Repair Kit includes items 3, 8 & 11.



STANDARD ROTATION

Motor Wired - Term. No.1(-); No. 2(+)
Reversal of (+) & (-) leads reverses rotation and ports in/out orientation.

DIMENSIONS



SEAL REPLACEMENT

(continued from front)

Where mechanical seals are used, both components (stationary and rotating member) must be replaced at the same time. Lip seals must be pushed out of their press-fitted position and new seals pressed into place, using a sealant on the outside of the lip seal housing.

Refer to exploded view drawings for seal location and part numbers for ordering purposes.

RUBBER IMPELLER PUMP BRONZE CLOSE COUPLED

MODEL
406M



OBARDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

406MK-04N26



FEATURES

- All Bronze Construction
- Stainless Steel Shafts
- Portable
- Compact
- Easy Impeller Replacement
- Macerator Easily Replaced
- Reversible Wear Plate
- Vacuum Switch Shut-off Optional

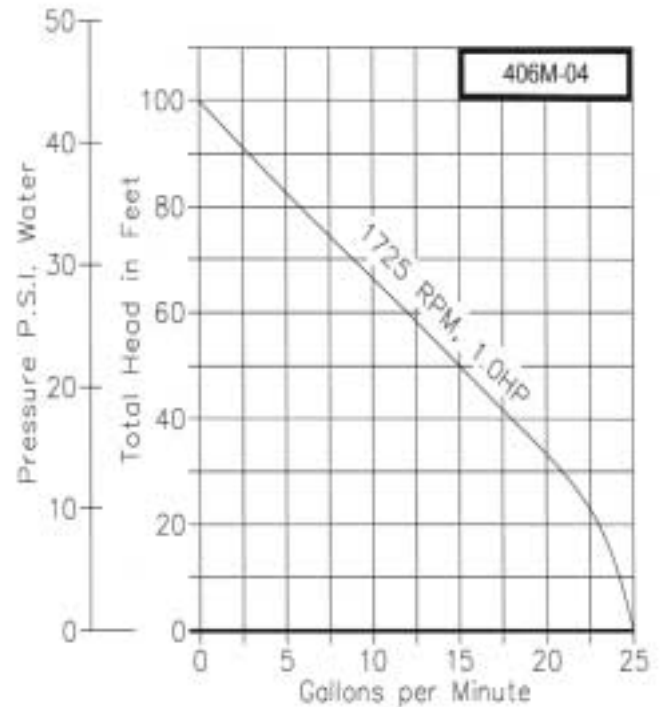
GENERAL DESCRIPTION

Close coupled Rubber Impeller Pumps are made of high quality bronze for maximum corrosion resistance. The rubber impeller is either directly attached to the stainless steel motor shaft or the impeller is mounted on a separate stainless steel shaft which is counterbored on the outer end in order to slide over the carbon steel motor shaft. Ball or sleeve bearings in the motor support the shaft. Model 406M has a mechanical seal. Impellers are made of Neoprene rubber, Buna N impellers are available on request.

Flexible blades on the periphery of the impeller provide the pumping action. While the impeller rotates, the liquid between the blades is continuously squeezed out into the discharge port by a cam located inside the pumping chamber. The flow may be throttled or shut off for a short period without the need of a relief valve.

DRIVE ARRANGEMENT

Close coupled Rubber Impeller Pumps are mounted directly onto the electric motor without the use of a shaft coupling. This pump is coupled to a standard motors with Nema C flange. It uses a bronze adapter plate to accommodate the pump.



LIQUIDS AND TEMPERATURE

Liquids handled by Rubber Impeller Pumps with standard Neoprene impellers are primarily fresh or salt water and water solutions. Rubber Impeller Pumps are not suitable for pumping gasoline or solvents. Buna N impellers can handle oil contaminated water and kerosene at reduced impeller service life.

Liquid temperature range is from 40°F to 140°F. If freezing conditions are expected, the pump should be drained by loosening the cover screws and the pump chamber should be filled with antifreeze. Viscous liquids and oils can not be pumped with Rubber Impeller Pumps.

SUCTION LIFT

On initial start-up Rubber Impeller Pumps must be primed to prevent dry-running of the impeller. Suction lifts of 15 ft. are possible when pump is fully primed. A foot valve with built-in strainer at the beginning of the suction line is recommended. Suction lines should be as short as possible.

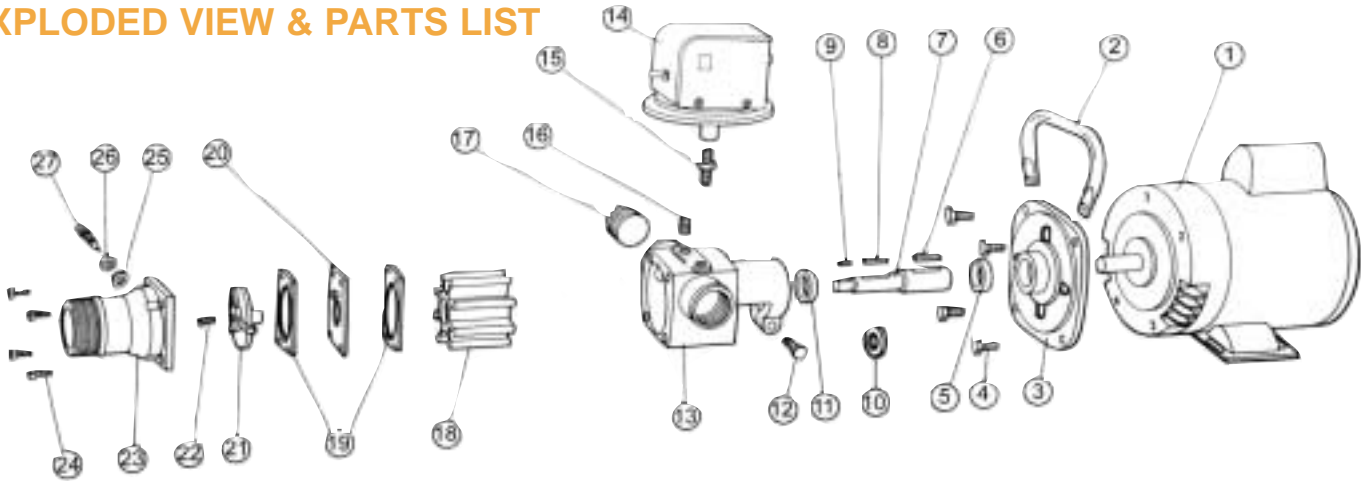
**MODEL
406M**

RUBBER IMPELLER PUMP BRONZE CLOSE COUPLED



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW & PARTS LIST



Part No.	1	2	3	4	5	6	7	8	9	10	11	12	13
	Motor	Handle	Adapter	Screw	Collar	Key	Shaft	Key	Key	Washer	Seal Assy.	Screw	Body
	1 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
406M-04	---	---	7459	5411	5886	6845	7519	5475	6947	6631	32230	5595	7040
406M-04N26	7055	9773	7459	5411	5886	6845	7519	5475	6947	6631	32230	5595	7040
406MK-04N26	7055	9773	7459	5411	5886	6845	7519	5475	6947	6631	32230	5595	7040

Part No.	14	15	16	17	18	19	20	21	22	23	24	25	26
	Vacuum Switch	Nipple	Pipe Plug	Pipe Plug	Impeller	Gasket	Plate	Wheel	Screw	Cover	Screw	Washer	Jam Nut
	1 Reqd	1 Reqd	2 Reqd	1 Reqd	1 Reqd	2 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd
406M-04	---	---	7043	7189	6603	7188	7101	7075	6437	7100	8229	7255	7256
406M-04N26	---	---	7043	7189	6603	7188	7101	7075	6437	7100	8229	7255	7256
406MK-04N26	7046	7050	7043	7189	6603	7188	7101	7075	6437	7100	8229	7255	7256

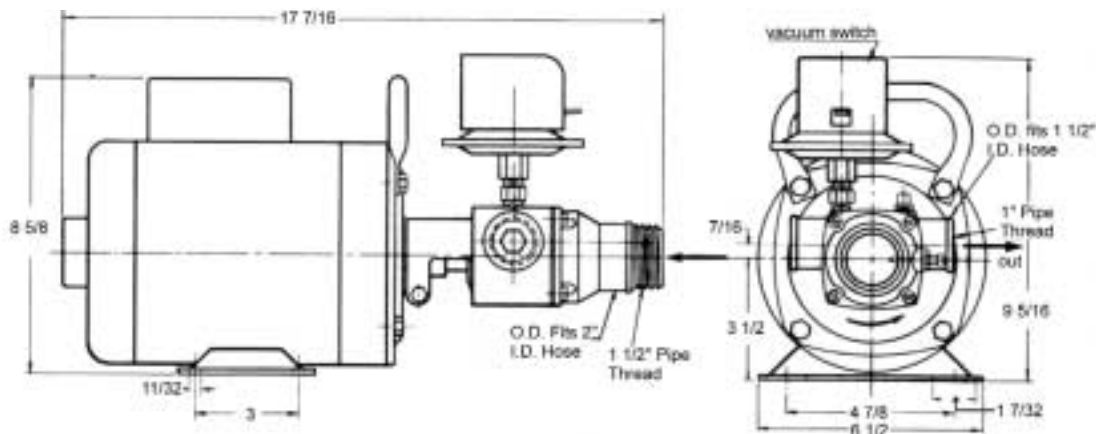
Part No.	27	28	29	30	31	32	33	34	
	Pick Screw	Cord	Terminal Spade	Wire Nut	Wire Nut	Washer (Handle)	Screw (Handle)	Cord	Repair Kits*
	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	2 Reqd	2 Reqd	1 Reqd	
406M-04	7258	---	---	---	---	---	---	---	10956
406M-04N26	7258	7044	7297	9850	9857	6831	5974	---	10956
406MK-04N26	7258	7044	7297 ¹	9850	9857	6831	5974	7047	10956

*Repair Kits contain items 11, 18 & 19.
Vacuum Switch Repair Kit is p/n 10798. Kit contains items 14, 15, 29 & 34.

¹ Five Required.

Items 28 - 34 are not shown on illustration.

DIMENSIONS





SEWAGE TRANSFER MACERATOR



AIR CONDITIONING REFRIGERATION

BRONZE CLOSE COUPLED CENTRIFUGAL PUMP

MODEL
101M

 OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE 3/8"



FEATURES

- All Bronze
- Stainless Steel or Monel Shaft for Marine Use
- Teflon(R)* Barrier Seal to Protect Motor Bearings
- Carbon Face Mechanical Pump Seals
- Will handle difficult solutions with proper seals - Viton(R)* (S10) or Teflon(R)* (S11).
- Explosion Proof Motors Available
- Will Handle Contaminated Liquids
- Extremely Quiet
- A Standard in the Marine Air Conditioning Industry

LIQUIDS

The special pump alloys used provide corrosion resistance to many liquids including water, water solutions, and a wide range of commercial chemicals. Questions as to the chemical compatibility of special liquids should be referred to the factory.

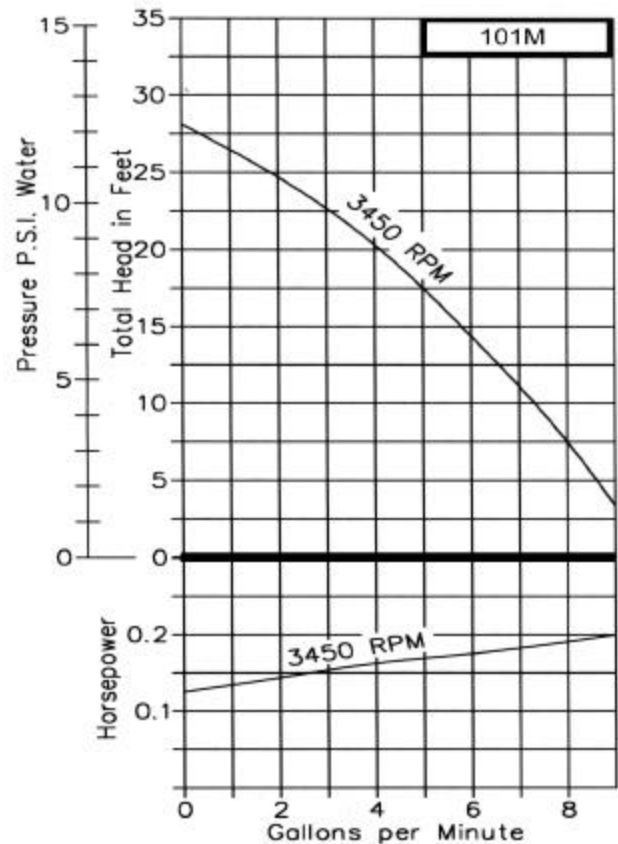
Viscous liquids with a maximum viscosity of 2000 Saybolt Seconds Universal can be pumped. However, when pumping viscous liquids as compared with water, a reduction in flow and pressure occurs and the required horsepower rate increases.

Liquids heavier than water require additional horsepower in direct proportion to the increase in specific gravity. Liquids contaminated with small solids or abrasives can be handled, but a reduction in mechanical seal life must be expected.

CHARACTERISTICS

This close-coupled pump uses a standard NEMA C-Flange Jet Pump Motor with weld-on base and threaded shaft end to accept the pump impeller. Single phase motors are non-reversible and are wired for the proper pump rotation which is counter-clockwise looking at inlet end of pump. See

Capacity - Water at 60° F



the dimensional drawing on back. Three phase motors must be checked out for proper rotation when pump is installed. Interchanging of any 2 wires in a 3-phase system will reverse motor rotation.

The pump uses a mechanical type shaft seal with a Buna rubber element. It is suitable for water, oils, and some mild solvents and it is limited to 212° F. Viton® seals and Teflon® seals (Chemlon) are available for severe solvents, difficult chemicals, and elevated temperatures.

These centrifugal pumps are not self-priming. They must be installed below the liquid level so that the liquid flows to the pump by gravity (flooded suction). However, if a foot valve is used at the beginning of the suction line, and all air is bled from the pump by manual priming, the pump will lift on the suction side up to 15 feet. Such a system relies entirely on the non-leaking foot valve for starting capability.

The flow of a centrifugal pump can be conveniently controlled by a throttling valve in the discharge line without the need for a relief valve. In centrifugal pumps, the horsepower demand will decrease as the pressure increases. Maximum horsepower occurs with a wide open discharge.

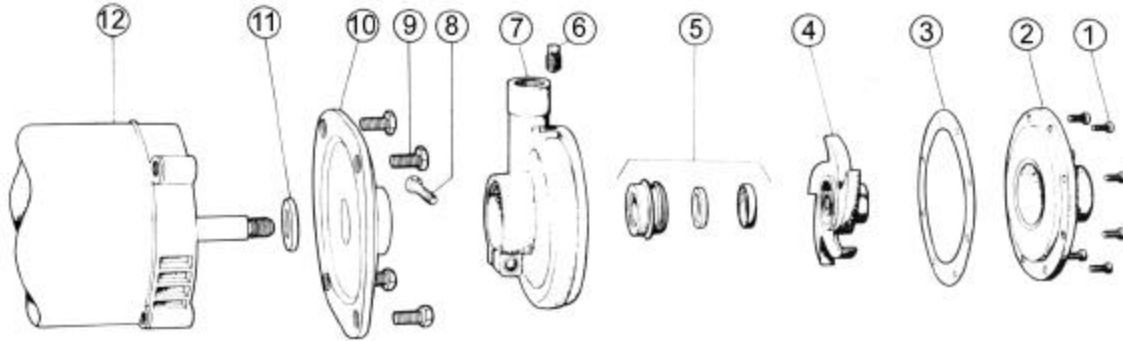
* Viton® is a registered trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.
Teflon® is a registered trademark of DuPont. Teflon® or equivalent PTFE will be used.

**MODEL
101M**

BRONZE CLOSE COUPLED CENTRIFUGAL PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4 ¹	5 ¹	6	7	8	9	10	11 ¹	12	13 ^{1*}	Repair Kit
	Screw	Cover	Gasket	Impeller	Seal Assy.	Plug	Body	Screw	Screw	Adapter	Lip Seal	Motor	Set Screw	1 Reqd
	6 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
101M	5385	6483	6502	6589	32155	5395	6475	5595	5411	6699	6683	---	---	10719 (single phase)
101MP	5385	6483	6502	7718	32155	5395	6475	5595	5411	6699	6683	---	9849	11063 (three phase)

¹ Repair Kit contains items 3, 4, 5, 11 & 13.

* Not shown - impeller set screw for three phase motors only.

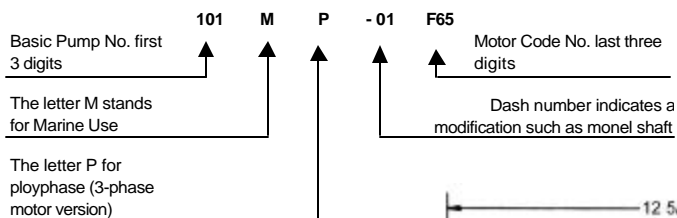
PUMP & MOTOR OPTIONS*

*Note: These are the most frequently used pump and motor combinations. If you have other needs, our sales reps can recommend a pump and motor for your application.

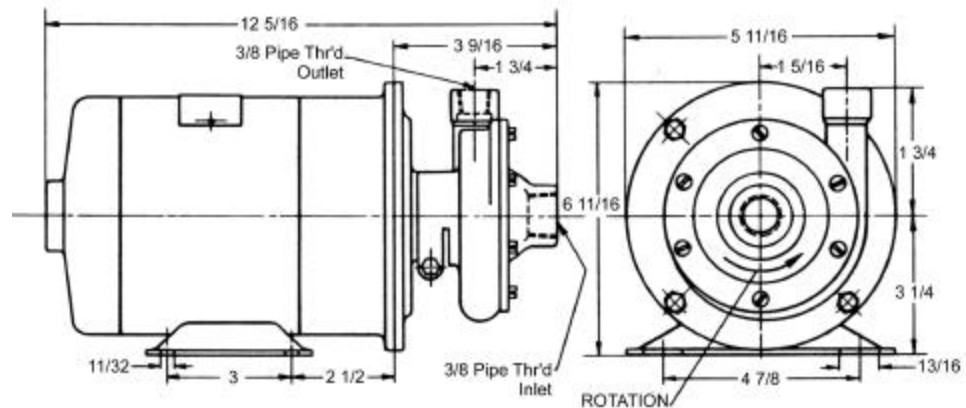
Pump No.	Electric Motor*	Motor Shaft	Part No.
101M-F13	3450 RPM 1/3 HP Single Phase 115V, ODP	Stainless Steel	5859
101M-01F26	3450 RPM 1/3 HP Single Phase 115V, ODP	Monel	32273
101M-J20	3450 RPM, 1/2 HP, Single Phase, 115/230V, TEFC	Stainless Steel	7976
101MP-F57	3450 RPM, 1/3 HP, Three Phase, 220/440V, ODP	Stainless Steel	6996

*Motor horsepowers are not indicative of pump horsepower required. Motors listed are standard, economical, and commercially available. See HP curve for actual horsepowers required.

NUMBERING



DIMENSIONS



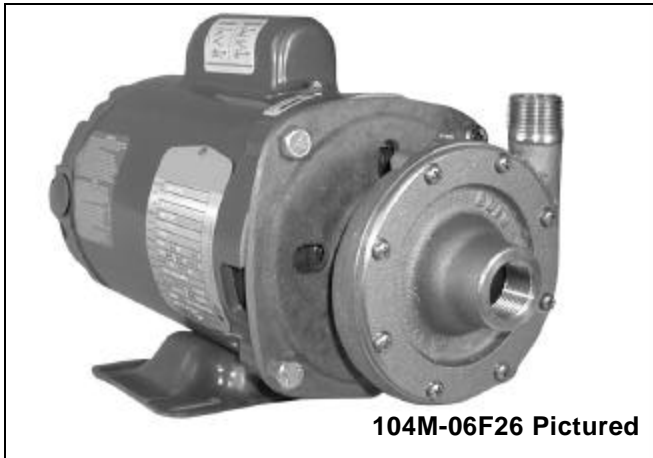
1/01 Specifications are subject to change without notice. All motor dimensions are subject to variations among motor manufacturers.

BRONZE CLOSE COUPLED CENTRIFUGAL PUMP

MODEL
104M

 OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE: INLET 3/4", OUTLET 1/2"



FEATURES

- All Bronze
- Stainless Steel or Monel Shaft for Marine Use
- Teflon® Barrier Seal to Protect Motor Bearings
- Carbon Face Mechanical Pump Seals
- Viton® (S10) or Teflon® (S11) Pump Seals Available for Solvent Transfer
- Explosion Proof Motors Available
- Will Handle Contaminated Liquids
- Extremely Quiet
- A Standard in the Marine Air Conditioning Industry

LIQUIDS

The special pump alloys used provide corrosion resistance to many liquids including water, water solutions, and a wide range of commercial chemicals. Questions as to the chemical compatibility of special liquids should be referred to the factory.

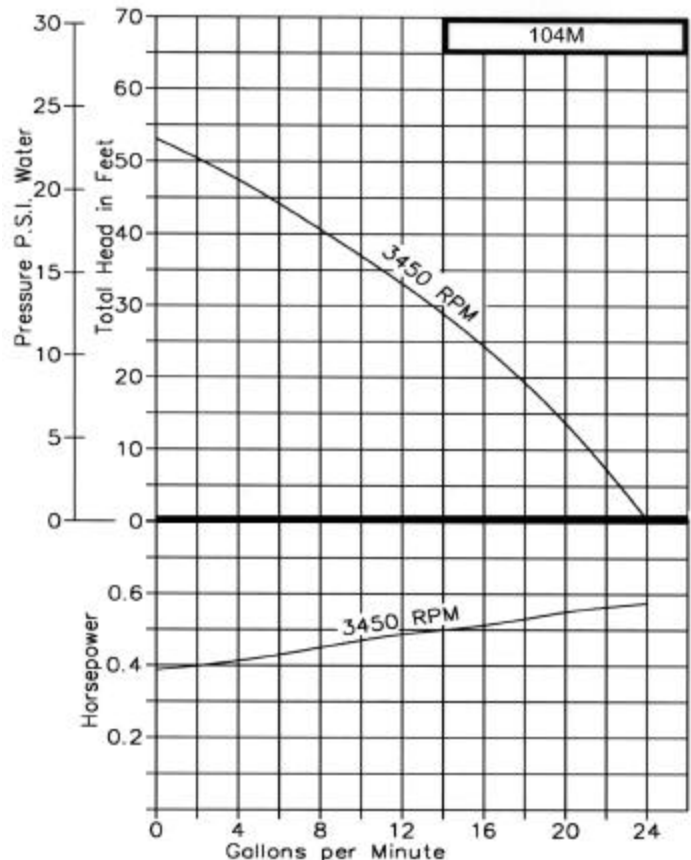
Viscous liquids with a maximum viscosity of 2000 Saybolt Seconds Universal can be pumped. However, when pumping viscous liquids as compared with water, a reduction in flow and pressure occurs and the required horsepower rate increases.

Liquids heavier than water require additional horsepower in direct proportion to the increase in specific gravity. Liquids contaminated with small solids or abrasives can be handled, but a reduction in mechanical seal life must be expected.

CHARACTERISTICS

This close-coupled pump uses a standard NEMA C-Flange Jet Pump Motor with weld-on base and threaded shaft end to accept the pump impeller. Single phase motors are non-reversible and are wired for the proper pump rotation which is counter-clockwise looking at inlet end of pump. See

Capacity - Water at 60° F



the dimensional drawing on back. Three phase motors must be checked out for proper rotation when pump is installed. Interchanging of any 2 wires in a 3-phase system will reverse motor rotation.

The pump uses a mechanical type shaft seal with a Buna rubber element. It is suitable for water, oils, and some mild solvents and it is limited to 212° F. Viton® seals and Teflon® seals are available for severe solvents, difficult chemicals, and elevated temperatures.

These centrifugal pumps are not self-priming. They must be installed below the liquid level so that the liquid flows to the pump by gravity (flooded suction). However, if a foot valve is used at the beginning of the suction line, and all air is bled from the pump by manual priming, the pump will lift on the suction side up to 15 feet. Such a system relies entirely on the non-leaking foot valve for starting capability.

The flow of a centrifugal pump can be conveniently controlled by a throttling valve in the discharge line without the need for a relief valve. In centrifugal pumps, the horsepower demand will decrease as the pressure increases. Maximum horsepower occurs with a wide open discharge.

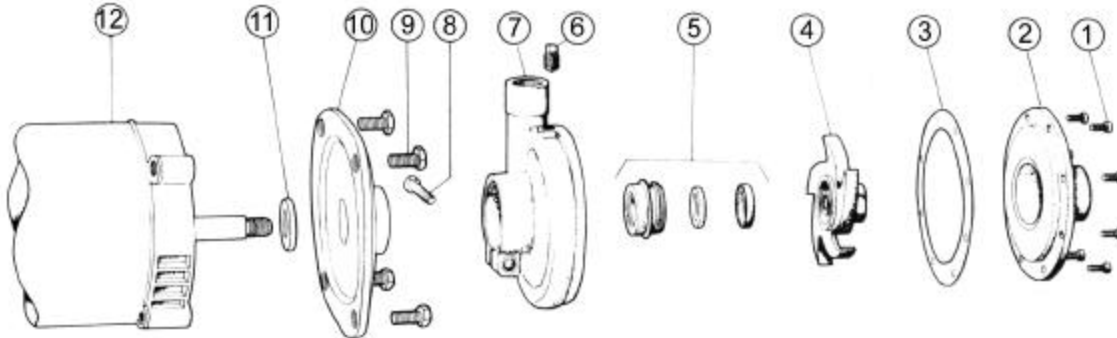
* Viton® is a registered trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.
Teflon® is a registered trademark of DuPont. Teflon® or equivalent PTFE will be used.

**MODEL
104M**

BRONZE CLOSE COUPLED CENTRIFUGAL PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4 ¹	5 ¹	6	7	8	9	10	11 ¹	12	13 ¹	Repair Kit
	Screw	Cover	Gasket	Impeller	Seal Assy.	Plug	Body	Screw	Screw	Adapter	Lip Seal	Motor	Set Screw	
	8 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	2 Reqd	1 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
104M	5385	5168	5328	6033	32155	7687	7515	5595	5411	6699	6683	---	---	10720 (Single Phase)
104M-06	5385	5168	5328	6033	32155	7687	9738	5595	5411	6699	6683	---	---	10720 (Single Phase)
104MP	5385	5168	5328	7432	32155	5395	7515	5595	5411	6699	6683	---	9849	12173 (Three Phase)

¹ Repair kit contains items 3, 4, 5, 11 & 13.

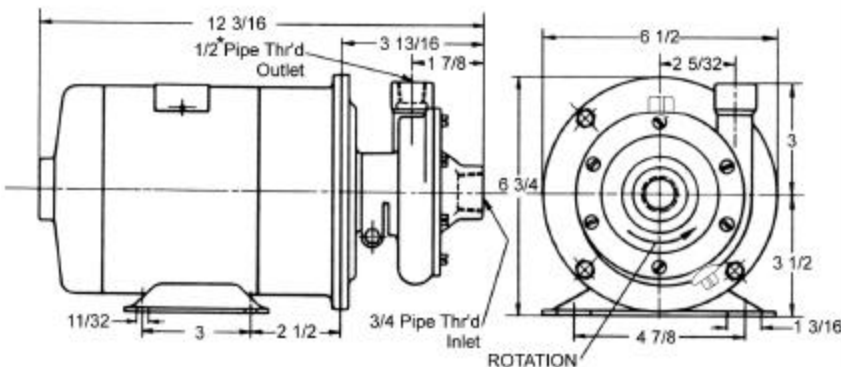
* Not shown - Impeller set screw for Three Phase motors only.

PUMP & MOTOR OPTIONS

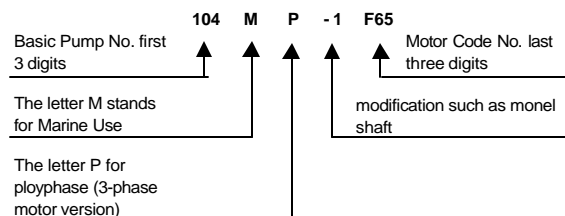
Note: These are the most frequently used pump and motor combinations. If you have other needs, our sales reps can recommend a pump and motor for your application.

Pump No.	Electric Motor	Motor Shaft	Part #
104M-F08	1/3 HP, 1725 RPM, 115/223 v, single phase, TEFC	stainless	8006
104M-F13	1/3 HP, 3450 RPM, 115 v, single phase, ODP	stainless	5859
104M-F21	1/3 HP, 3450 RPM, 115/230 v, single phase, XP	stainless	8214
104M-J17	1/2 HP, 3450 RPM, 110/220 v, single phase, TEFC	stainless	8772
104M-J19	1/2 HP, 3450 RPM, 115/230 v, single phase, ODP	stainless	5860
104M-J20	1/2 HP, 3450 RPM, 115/230 v, single phase, TEFC	stainless	7976
104M01F26	1/3 HP, 3450 RPM, 115 v, single phase, ODP	monel	32273
104M-01J26	1/2 HP, 3450 RPM, 115/230 v, single phase, ODP	monel	32332
104M-01J33	1/2 HP, 3450 RPM, 115/230 v, single phase, ODP	monel	8280-01
104M-06F13*	1/3 HP, 3450 RPM, 115 v, single phase, ODP	stainless	5859
104M-06F26*	1/3 HP, 3450 RPM, 115 v, single phase, ODP	monel	32273
104MP-F57	1/3 HP, 3450 RPM, 220/440 v, three phase, ODP	stainless	6996
104MP-M58	3/4 HP, 3450 RPM, 220/440 v, three phase, TEFC	stainless	7967
104MP01-F65	1/3 HP, 3450 RPM, 220/440 RPM, three phase, TEFC	monel	32355
104MP01-J58	1/2 HP, 3450 RPM, 220/440 v, three phase, TEFC	monel	9214

DIMENSIONS *3/4" External Thread also available (104M-06)



NUMBERING



CLOSE COUPLED BRONZE CENTRIFUGAL PUMP

MODEL
109MB



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE INLET 1 1/4, OUTLET 1



FEATURES

- All Bronze
- Stainless Steel or Monel Shaft for Marine Use
- Teflon®* Barrier Seal to Protect Motor Bearings
- Carbon Face Mechanical Pumps Seals
- Viton(R)* or Teflon(R)* Pump Seals Available for Solvent Transfer
- Explosion Proof Motors Available
- Will Handle Contaminated Liquids
- Extremely Quiet
- A Standard in the Marine Air Conditioning Industry

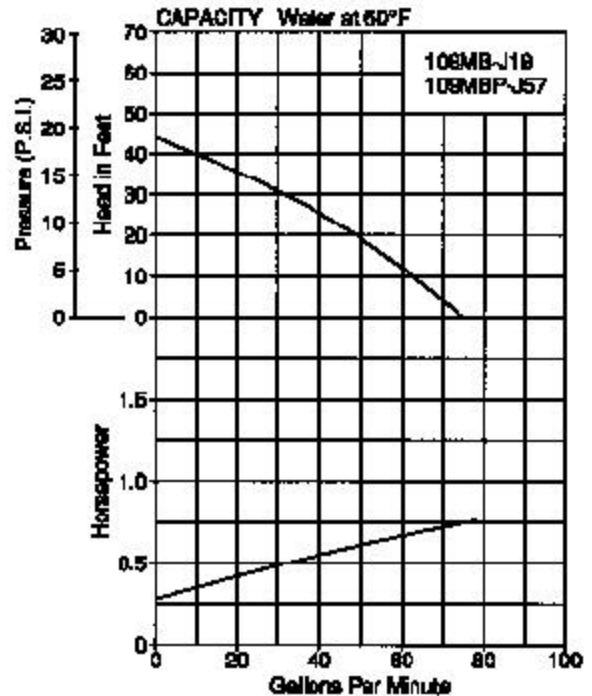
LIQUIDS

The special pump alloys used provide corrosion resistance to many liquids including water, water solutions, and a wide range of commercial chemicals. Questions as to the chemical compatibility of special liquids should be referred to the factory.

Viscous liquids with a maximum viscosity of 2000 Saybolt Seconds Universal can be pumped. However, when pumping viscous liquids as compared with water, a reduction in flow and pressure occurs and the required horsepower rate increases.

Liquids heavier than water require additional horsepower in direct proportion to the increase in specific gravity. Liquids contaminated with small solids or abrasives can be handled, but a reduction in mechanical seal life must be expected.

PERFORMANCE



CHARACTERISTICS

This close-coupled pump uses a standard NEMA C-Flange Jet Pump Motor with weld-on base and threaded shaft end to accept the pump impeller. Single phase motors are non-reversible and are wired for the proper pump rotation which is counter-clockwise looking at the inlet end of the pump. (See the dimensional drawing on back.) Three phase motors must be checked out for proper rotation when the pump is installed. Interchanging of any 2 wires in a 3-phase system will reverse motor rotation.

The pump uses a mechanical type shaft seal with a Buna N rubber element. It is suitable for water, oils, and some mild solvents and it is limited to 212°F and 75 P.S.I. Viton(R)* seals and Teflon(R)* seals are available for severe solvents and difficult chemicals.

These centrifugal pumps are not self-priming. They must be installed below the liquid level so that the liquid flows to the pump by gravity (flooded suction). However, if a foot valve is used at the beginning of the suction line and all air is bled from

(continued on back)

*Viton® is a registered trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.
Teflon® is a registered trademark of DuPont. Teflon® or equivalent PTFE will be used.

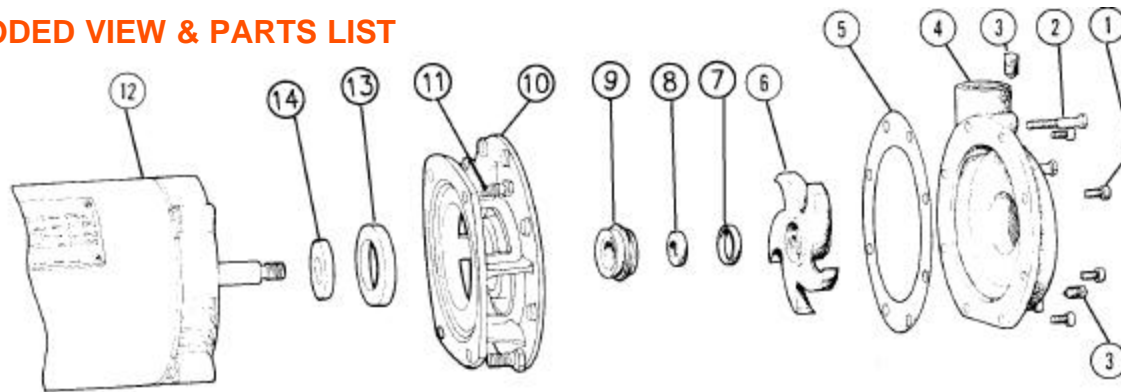
**MODEL
109MB**

CLOSE COUPLED BRONZE CENTRIFUGAL PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW & PARTS LIST



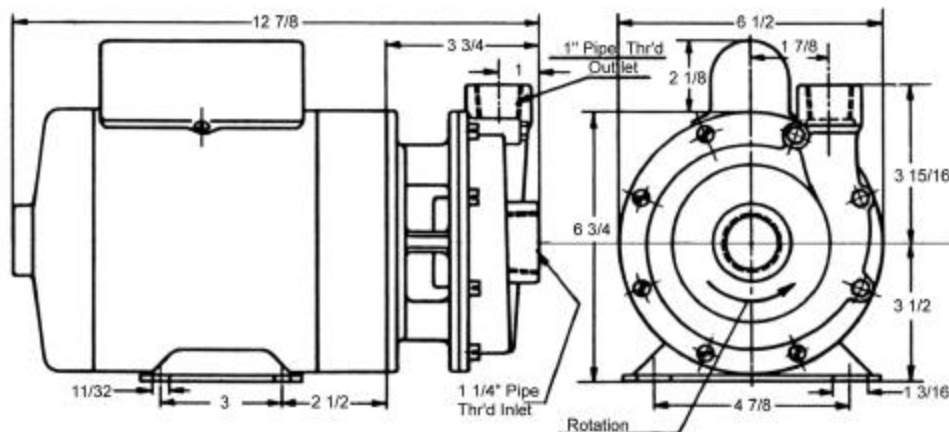
Pump No.	1	2	3	4	5	6	7 ²	8 ²	9 ²	10	11	12	13	14	15 ¹	Repair ³
	Short Screw	Long Screw	Pipe Plug	Body	Gasket	Impeller	Seal Seat (Pump)	Wear Face (Pump)	Seal (Pump)	Adapter	Screw	Motor	Insert	Seal (Adapter)	Set Screw	Kit
	5 Req'd	3 Req'd	2 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	
109MB	5504	5633	7687	5266	5307	6297	6020	6018	5377	5251	5411	---	6832	6683	---	10721
109MB-J19	5504	5633	7687	5266	5307	6297	6020	6018	5377	5251	5411	5860	6832	6683	---	10721
109MB-01J26	5504	5633	7687	5266	5307	6297	6020	6018	5377	5251	5411	32332	6832	6683	---	10721
109MBP-J57	5504	5633	5395	5266	5307	7196	6020	6018	5377	5251	5411	6998	6832	6683	9849	11065
109MBP01J67	5504	5633	5395	5266	5307	7196	6020	6018	5377	5251	5411	32500	6832	6683	9849	11065

¹ Set Screw for Polyphase motor only. (not shown)

³ Repair Kits contain items 5,6,7,8,9,14 & 15.

² Seal components 7,8, and 9 sold only as seal assy. p/n 32155.

DIMENSIONS



(continued from front)

the pump by manual priming, the pump will lift on the suction side up to 15 feet. Such a system relies entirely on a non-leaking foot valve for starting capability.

The flow of a centrifugal pump can be conveniently controlled by a throttling valve in the discharge line without the need for a relief valve. In centrifugal pumps, the horsepower demand will decrease as the pressure increases. Maximum horsepower occurs with a wide open discharge.

BRONZE CLOSE COUPLED CENTRIFUGAL PUMP

MODEL
172B

 OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE: INLET 3/4", OUTLET 3/4"



FEATURES

- Bronze Casting is resistant to sea water
- Stainless Steel Shaft for Marine Use
- Motor is totally enclosed with 9" long vinyl plastic insulated leads
- Compact
- Lightweight
- Mechanical Seal
- Ideal for:
 - Marine Air Conditioning
 - Engine Block Temperature Control
 - Radiator and Heat Exchanger Circulation
 - Baitwell Circulation

SEAL

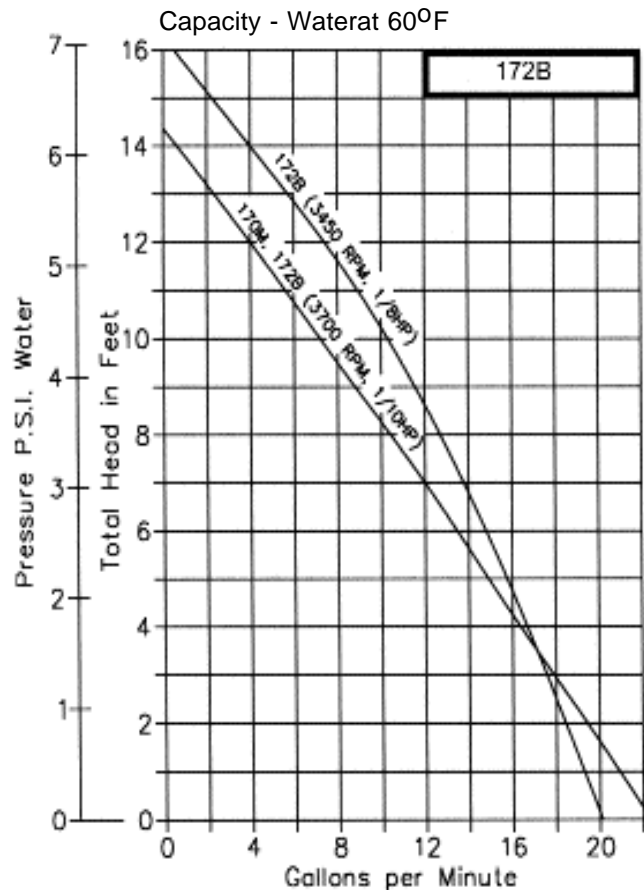
The pump uses a mechanical type shaft seal with a Buna rubber element. It is suitable for water, oils, and some mild solvents and is limited to 212°F, Viton® is available for up to 400°F (172B-08).

LIQUIDS

One of the outstanding features of this pump and motor unit is its compact D.C. motor size. Although small in size, adequate motor power is available for pumping water, water solutions, and a wide range of commercial chemicals. Questions as to the chemical compatibility of special liquids should be referred to the factory.

Viscous liquids with a maximum viscosity of 2000 Saybolt Seconds Universal can be pumped. However, when pumping viscous liquids as compared with water, a reduction in flow and pressure occurs and the required horsepower rate increases.

Liquids heavier than water require additional horsepower in direct proportion to the increase in specific gravity.



CHARACTERISTICS

Oberdorfer centrifugal pumps have a single rotating impeller. Liquid enters at the center and is thrown outward radially by centrifugal force. The impeller is not in contact with other pump parts resulting in quiet, efficient pumping action. The flow produced is not positive which permits the discharge line to be shut off completely without danger of overloading motors or bursting lines. Consequently, a relief valve is not required.

These centrifugal pumps are not self-priming. They must be installed below the liquid level so that the liquid flows to the pump by gravity (flooded suction). However, if a foot valve is used at the beginning of the suction line, and all air is bled from the pump by manual priming, the pump will lift on the suction side up to 15 feet. Such a system relies entirely on the non-leaking foot valve for starting capability.

The flow of a centrifugal pump can be conveniently controlled by a throttling valve in the discharge line without the need for a relief valve. In centrifugal pumps, the horsepower demand will decrease as the pressure increases. Maximum horsepower occurs with a wide open discharge.

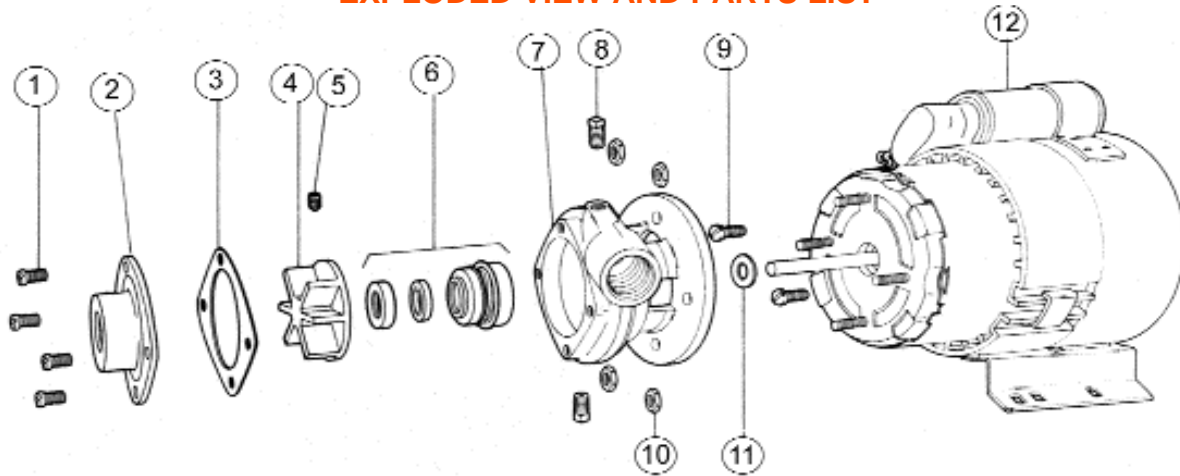
*Viton® is a registered trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.

**MODEL
172B**

BRONZE CLOSE COUPLED CENTRIFUGAL PUMP

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST



Pump No.	1	2	3 ¹	4 ¹	5	6 ¹	7	8	9	10	11	12	Repair Kit ¹
	Screw	Cover	Gasket	Impeller	Set Screw	Seal Assy.	Body	Plug	Screw	Hex. Nut	Slinger	Motor	
	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	2 Req'd	2 Req'd	4 Req'd	1 Req'd	1 Req'd	
172B	5385	7375	7020	7678	6079	32458	7456	5395	7424	7686	6651	---	11071

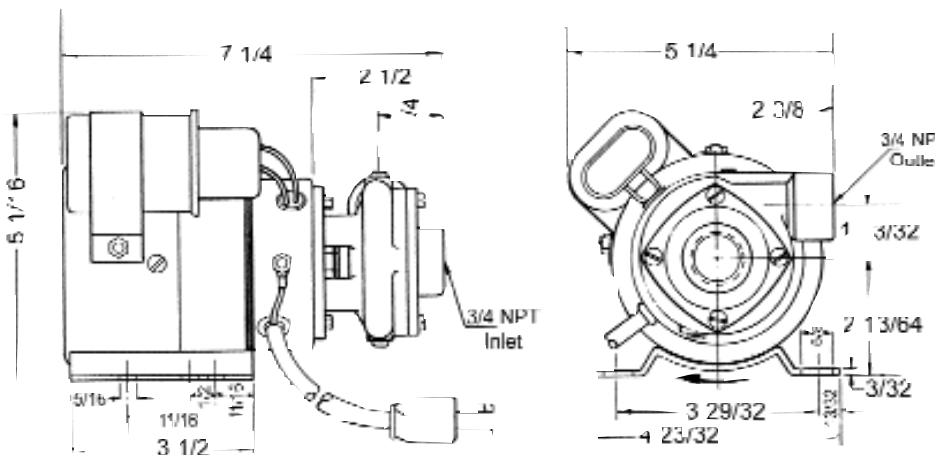
¹Repair kit contains items 3, 4 & 6.

PUMP & MOTOR OPTIONS*

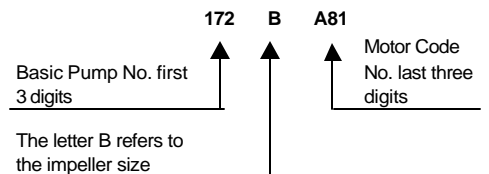
*Note: These are the most frequently used pump and motor combinations. If you have other needs, our sales reps can recommend a pump and motor for your application.

Pump No.	Electric Motor	Part #
172B-A81	1/10 HP, 3700 RPM, 12v, Single Phase, TEFC	9950
172B-A82	1/10 HP, 3700 RPM, 24v, Single Phase, TEFC	9949
172B-A85	1/8 HP, 3700 RPM, 12v DC, TEFC	8101
172B-A86	1/8 HP, 3700 RPM, 24v DC, TEFC	8102
172B-A87	1/8 HP, 3700 RPM, 32v DC, TEFC	8103
172B-B26	1/8 HP, 3450 RPM, 115v, Single Phase, TEFC	8281
172B-B27	1/8 HP, 3450 RPM, 220v, Single Phase, TEFC	8282

DIMENSIONS



NUMBERING



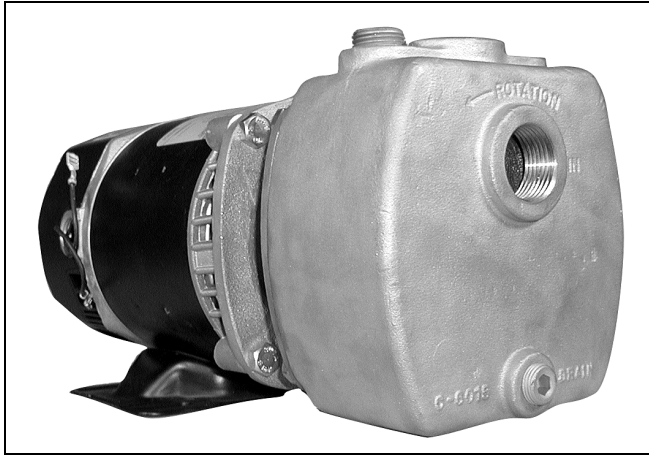
2/01 Specifications are subject to change without notice. All motor dimensions are subject to variations among motor manufacturers.

BRONZE OR ALUMINUM SELF-PRIMING CENTRIFUGAL PUMP

MODEL
300
300B

 OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PIPE SIZE 1"



CLOSE COUPLED TO ELECTRIC MOTOR

3450 RPM, 8' cord and feed thru switch optional, 1/3 H.P., 115 volt, 60 Hz, A.C. NEMA C flange jet pump motor with threaded shaft of stainless steel or monel. Explosion proof motors available on special order.

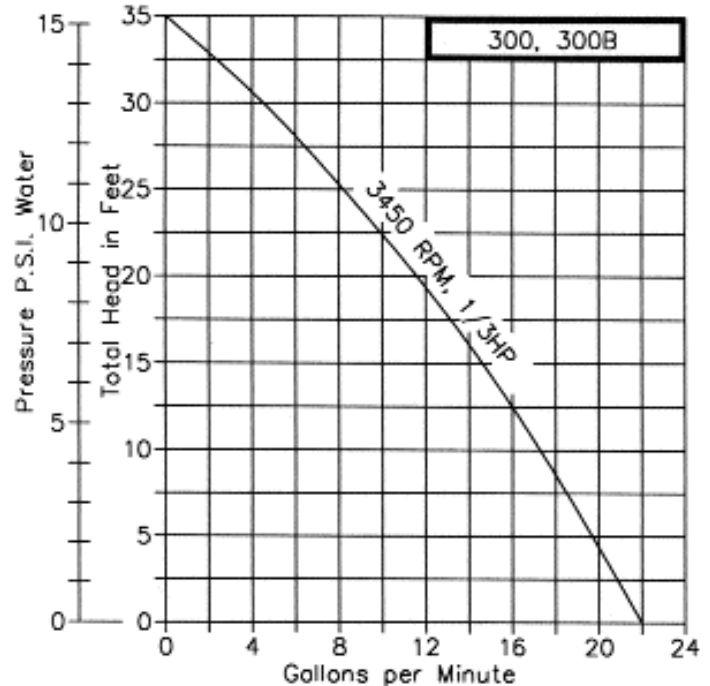
Pump No.	Material
300	Aluminum with stainless steel shaft, Single Phase
300B	Bronze with stainless steel shaft, Single Phase
300B-01	Bronze with Monel shaft, Single Phase
300P	Aluminum with stainless steel shaft, Three Phase

FEATURES

- Self-Priming to 20 Feet Suction Lift
- Available in Bronze or Corrosion Resistant Aluminum
- Bronze Models with Monel Shaft Sleeve - Ideal for marine service (air conditioning, bilge, and sea water recirculating).
- Can handle most difficult solvents with proper seal arrangement, Viton® (S10) or Teflon® (S11) available.

Up to 22 gallons per minute water flow and suction lift of 15 feet without a foot or check valve (25 foot suction lift using a foot or check valve and a filled inlet line). A 1/2" pipe plug on the tank top is for initial filling of priming chamber and inlet line--pump priming is automatic thereafter. Pump seal is mechanical carbon face type mated to ceramic wear face for maximum durability. Other seal components are made of Buna N with low swell characteristics for compatibility with a wide range of liquids including many chemicals and solvents. These pump models are widely used for the pumping of Perchloroethylene. **Must be operated in the horizontal position. (As shown in picture)**

CAPACITY - Water 60°F - Gallons Per Minute



Capacity - Water 60°F - Gallons Per Minute

Maximum lift without foot valve is 10 feet.

Discharge Pressure		3450 RPM Suction Lift				
Feet	Equiv. P.S.I.	0 Ft.	5 Ft.	10 Ft.	15 Ft.	20 Ft.
0	0	22	20	17	14	10
5	2.2	20	17	14	10	5
10	4.3	17	14	10	5	---
15	6.5	14	10	5	---	---
20	8.7	10	5	---	---	---
25	10.8	5	---	---	---	---
30	13.0	3	---	---	---	---
35	15.2	1	---	---	---	---

SEAL OPTIONS

(Note: Seal and shaft modifications below are not physically interchangeable. Consult factory for modification data.)

Viton® A Solvent Mechanical Seal: Mechanical seal for oils, fuels, lubricants, most mineral acids, and many solvents that attack other rubbers such as Carbon Tetrachloride, toluene, benzene, and xylene.

Teflon® Mechanical Seal: For virtually all industrial chemicals, corrosives and solvents - as limited by compatibility of basic pump metal of construction.

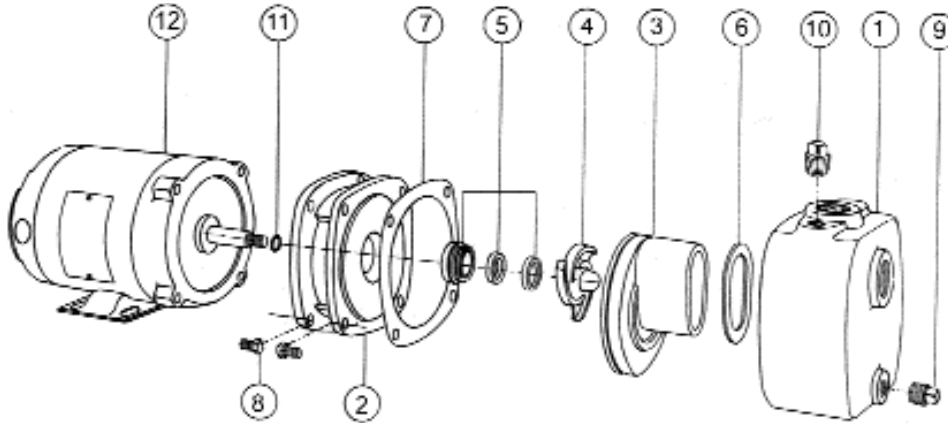
* Viton® is a trademark of DuPont Dow Elastomers. Viton® or equivalent FKM will be used.
Teflon® is a trademark of DuPont. Teflon or equivalent PTFE will be used.

MODEL
300
300B

BRONZE OR ALUMINUM SELF-PRIMING CENTRIFUGAL PUMP

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PARTS LIST AND EXPLODED VIEW



Pump Number	1	2	3	4 ¹	5 ¹	6 ¹	7 ¹	8	9	10	11 ¹	12	13 ¹	Repair Kit ¹
	Body	Adapter	Diffuser	Impeller	Seal Assy.	Gasket Diffus.	Gasket Flange	Screw	Plug	Plug	Shim	Motor	Set Screw	
	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	8 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	
300	6015	6014	6017	6006	32155	6021	6022	5411	6440	6441	6025	---	---	10791
300B	7190	7191	7192	7193	32155	6021	6022	5411	7321	7443	6025	---	---	10865
300P	6015	6014	6017	7199	32155	6021	6022	5411	6440	6441	6025	---	9849	10864

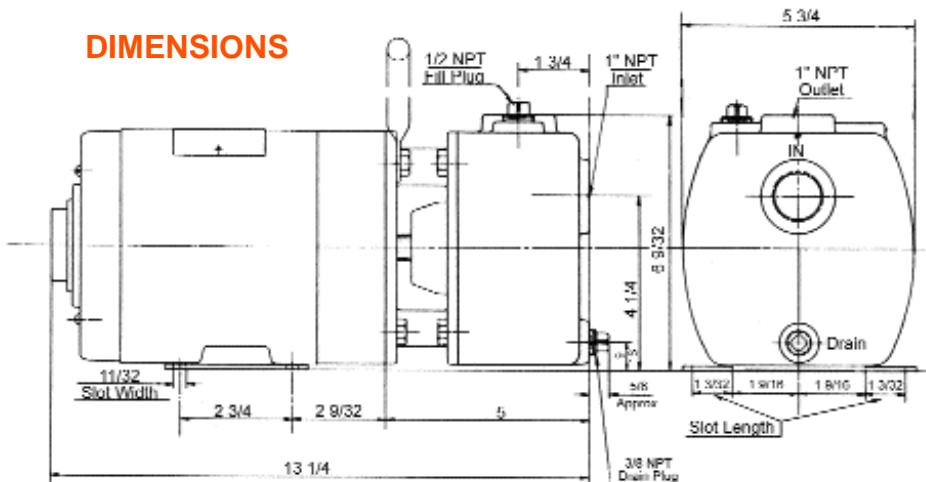
¹Repair Kit #10791 and #10865 include items 4, 5, 6, 7 & 11. Repair kit #10864 includes items 4, 5, 6, 7, 11 & 13.

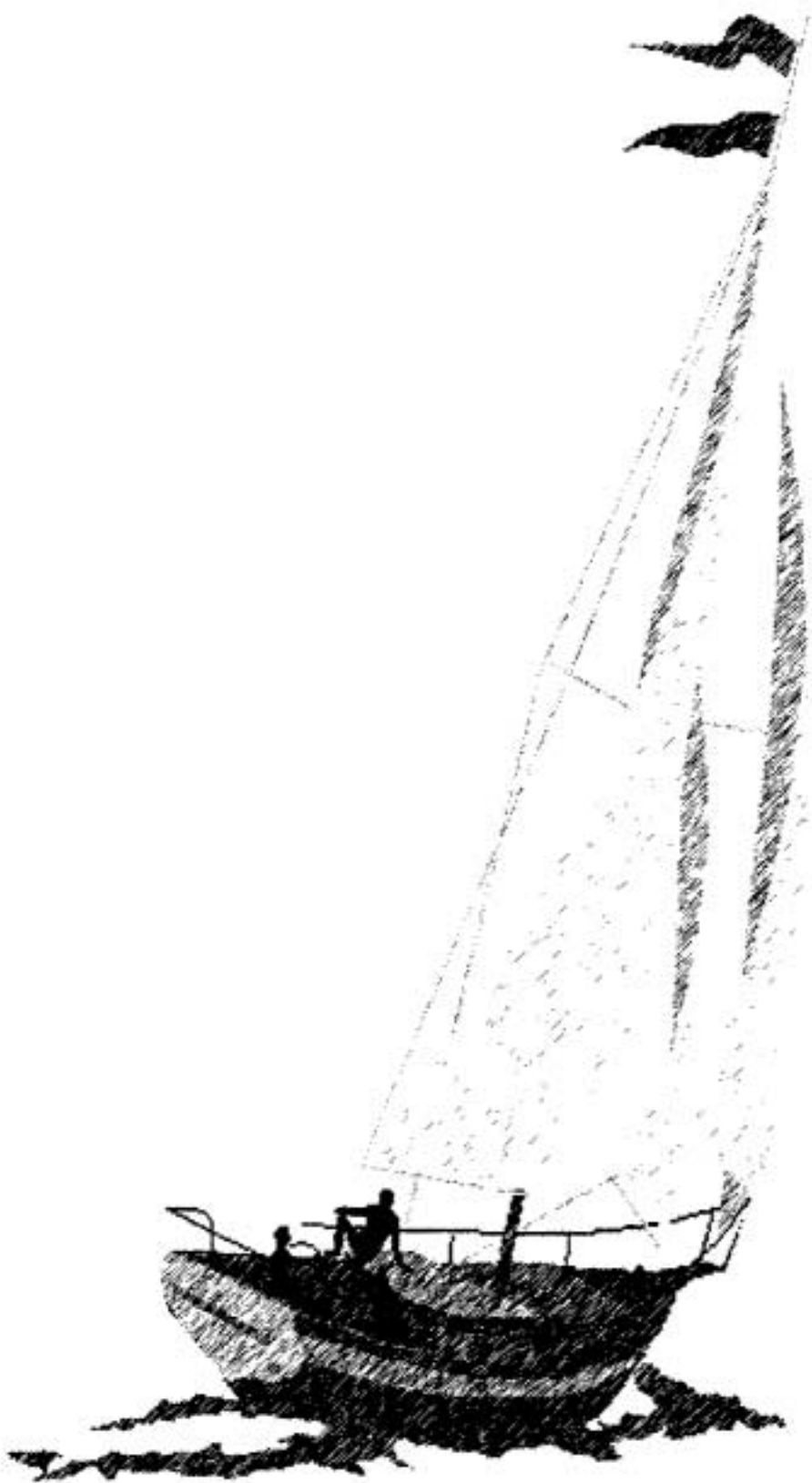
PUMP & MOTOR OPTIONS These are the most frequently used pump and motor combinations. If you have other needs, our sales reps can recommend a pump and motor for your application.

Pump No.	Motor	Part #
300-F13	1/3 HP, 3450 RPM, 115v, Single Phase, ODP	5859
300-J17	1/2 HP, 3450 RPM, 110/220v, Single Phase, TEFC	8772
300-J20	1/2 HP, 3450 RPM, 115/230v, Single Phase, XP	7976
300B-01F26	1/3 HP, 345- RPM, 115v, Single Phase, ODP	32273
300B-01J26	1/2 HP, 3450 RPM, 115/230v, Single Phase, ODP	32332
300B-01J30	1/2 HP, 3450 RPM, 115/230v, Single Phase, TEFC	32498
300B-01J33	1/2 HP, 3450 RPM, 115/230v, Single Phase, ODP	8280
300B-F13	1/3 HP, 3450 RPM, 115v, Single Phase, ODP	5859

Pump No.	Motor	Part #
300B-F19	1/3 HP, 3450 RPM, 115/230v, Single Phase, ODP	7957
300B-F21	1/3 HP, 3450 RPM, 115/230v, Single Phase, XP	8214
300B-J17	1/2 HP, 3450 RPM, 110/220v, Single Phase, TEFC	8772
300B-J20	1/2 HP, 3450 RPM, 115/230v, Single Phase, XP	7976
300P-F57	1/3 HP, 3450 RPM, 220/440v, Three Phase, ODP	6996
300P-J57	1/2 HP, 3450 RPM, 220/440v, Three Phase, ODP	6998
300P-J58	1/2 HP, 3450 RPM, 220/440v, Three Phase, TEFC	9214

DIMENSIONS





CLUTCH DRIVEN FIRE PUMPS

BRONZE PEDESTAL ROTARY GEAR PUMPS

MODELS
N11500-21
N11510-21

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

1 1/4" NPT PORTS



MODEL N11500-21 - UPPER DRIVE
MODEL N11510-21 - LOWER DRIVE

FEATURES

- Bronze Corrosion Resistant Castings
- Stainless Steel Shafts & Fasteners
- Self-Lubricating Carbon Bearings
- Packing (Braided Acrylic yarn with special lubricant and Graphite)
- For Mechanical Seals, see Models N11HDM

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. For pulley driven pumps a pillow block bearing must be used at the drive shaft end to absorb the belt forces. The drive shaft is sufficiently long enough to accommodate a pillow block in addition to the pulley.

Correct alignment is absolutely essential for satisfactory pump life. Recheck alignment after the piping has been connected to the pump.

LIQUIDS AND TEMPERATURE

Service life will be increased substantially if the liquid pumped is clean and has a lubricity value. These pumps have extremely close tolerances. Fine abrasives like sand, silt, or powders in suspension will destroy pumping ability.

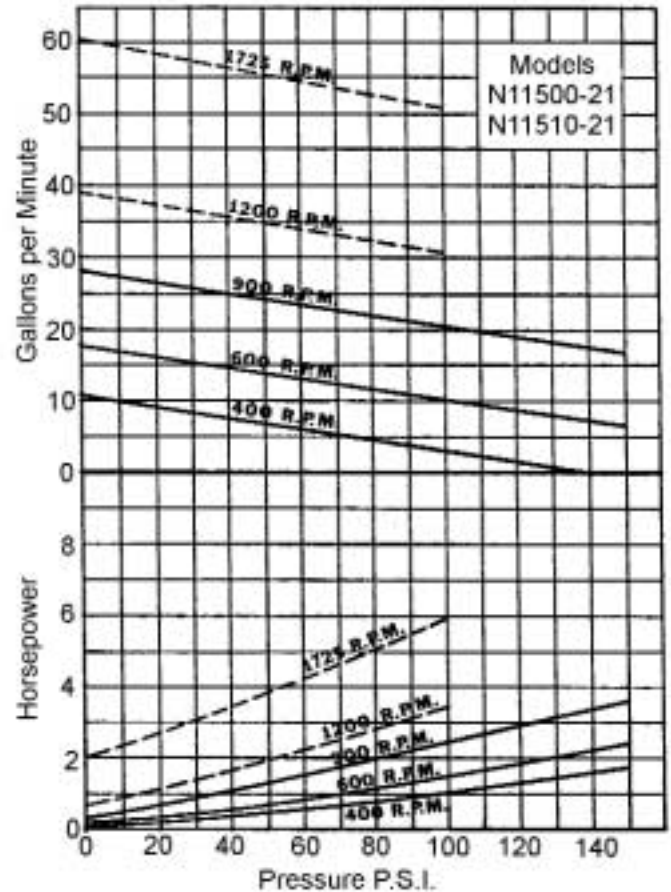
Liquids compatible with bronze, stainless steel and the acrylic graphite packing can be pumped. Solvent resistant packings and Teflon(R)* packings are also available. See a chemical compatibility table or check factory. When possible, flush the pump with water after using.

Temperature extremes are detrimental to service life and should be avoided. Basic metals of construction allow temperature range of -40°F to 400°F. the acrylic graphite packing is rated to 500°F. Freezing liquid in the pump can deform or damage the pump.

Viscous liquids such as molasses or oils require a lower pumping speed, in extreme cases as low as 200 R.P.M. Consult factory for recommended speeds and increased horsepower requirements.

*Teflon(R) is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

CAPACITY Water 60°F



Note: Dotted lines(---) recommended for intermittent duty only due to accelerated wear at higher speeds and pressures.

Large suction lines are required to prevent cavitation which can cause pump destruction.

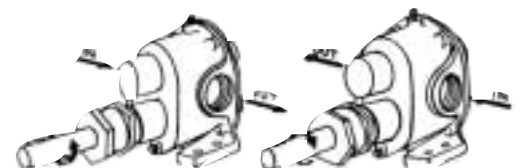
Liquids with specific gravities heavier than water such as dry cleaning fluids require an increase in motor horsepower directly proportional to the increase in specific gravity over water.

SUCTION LIFT

A rotary gear pump is capable of lifting water on the suction side as high as 20 feet. Though gear pumps are self-priming, a foot valve is recommended. For pumping water directly from streams or ponds, a wire mesh strainer must be used at the beginning of the suction line to prevent stones from entering the pump. Strainer and foot valve are commercially available as combination units.

ROTATION

N11510-21



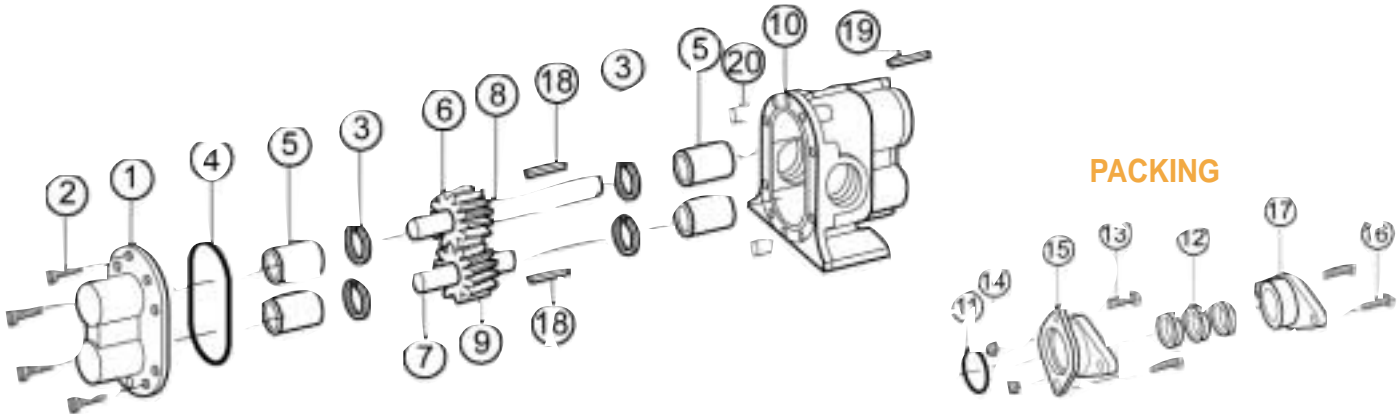
MODELS
N11500-21
N11510-21

BRONZE PEDESTAL ROTARY GEAR PUMPS



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST

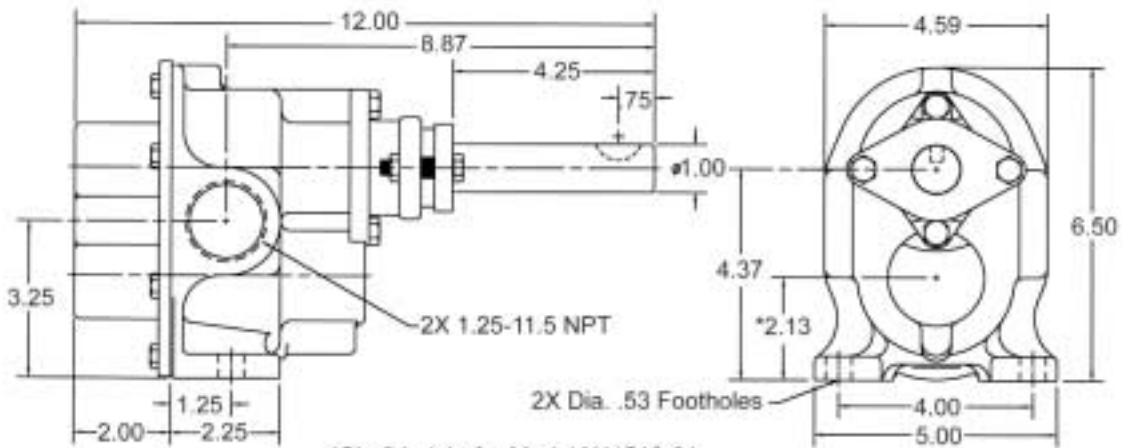


Pump No.	1	2	3 ¹	4 ¹	5 ¹	6 ¹	7 ¹	8 ¹	9 ¹	10
	Cover	Screw	Snap Ring	O-Ring	Bearing	Drive Gear	Idle Shaft	Drive Shaft	Idle Gear	Body
	1 Req'd	8 Req'd	4 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd
N11500-21	9333NN5N	5393	7651	9797-158	5108	9833	7652	5685	9834	9331NG7N
N11510-21	9333NN5N	5393	7651	9797-158	5108	9833	7652	5685	9834	9331NG8N

Pump No.	11	12 ¹	13	14	15	16	17	18 ¹	19	20	Repair Kit
	O-Ring	Packing	Screw	Nut	Gland	Screw	Seal Adapter	Key	Key	Dowel Pin	
	1 Req'd	3 Req'd	2 Req'd	2 Req'd	1 Req'd	2 Req'd	1 Req'd	2 Req'd	1 Req'd	2 Req'd	
N11500-21	6515	7624	5916	8395	7451	9905	9904	6518	5576	8597	10642
N11510-21	6515	7624	5916	8395	7451	9905	9904	6518	5576	8597	10642

¹ Repair Kits contain items 3,4,5,6,7,8,9,12 and 18.

DIMENSIONS



*Shaft height for Model N11510-21.

BRONZE PEDESTAL ROTARY GEAR PUMPS

MODELS
N13500-21
N13510-21



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

1 1/2" NPT PORTS



MODEL N13500-21- UPPER DRIVE
MODEL N13510-21 - LOWER DRIVE

FEATURES

- Bronze Corrosion Resistant Castings
- Stainless Steel Shafts & Fasteners
- Self-Lubricating Carbon Bearings
- Packing (Braided Acrylic yarn with special lubricant and Graphite)
- For Mechanical Seals, see Models N13HDM

DRIVE

Either direct drive with flexible coupling or pulley drive can be used. For pulley driven pumps a pillow block bearing must be used at the drive shaft end to absorb the belt forces. The drive shaft is sufficiently long enough to accommodate a pillow block in addition to the pulley.

Correct alignment is absolutely essential for satisfactory pump life. Recheck alignment after the piping has been connected to the pump.

LIQUIDS AND TEMPERATURE

Service life will be increased substantially if the liquid pumped is clean and has a lubricity value. These pumps have extremely close tolerances. Fine abrasives like sand, silt, or powders in suspension will destroy pumping ability.

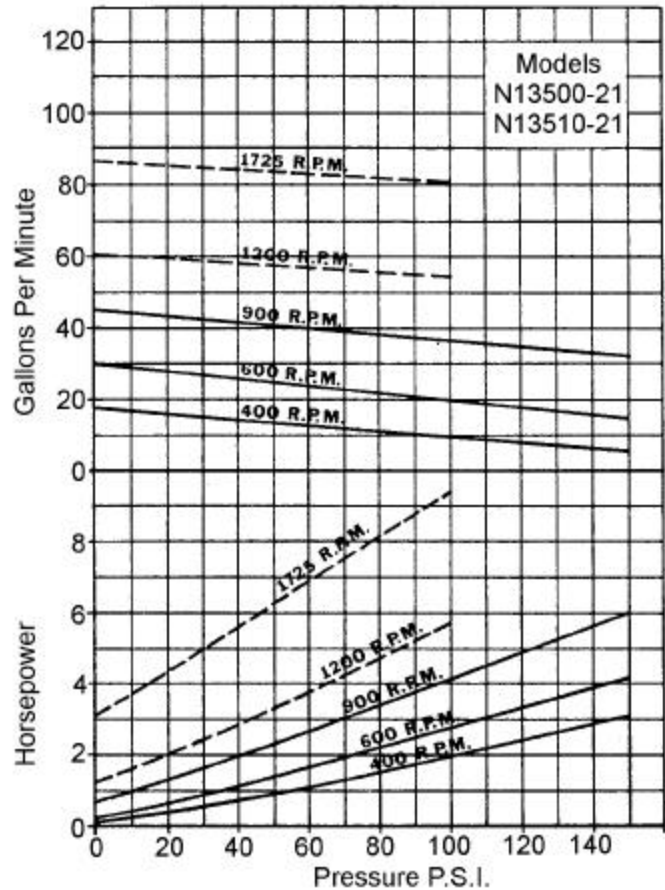
Liquids compatible with bronze, stainless steel and the acrylic graphite packing can be pumped. Solvent resistant packings and Teflon® packings are also available. See a chemical compatibility table or check factory. When possible, flush the pump with water after using.

Temperature extremes are detrimental to service life and should be avoided. Basic metals of construction allow temperature range of -40°F to 400°F. the acrylic graphite packing is rated to 500 °F. Freezing liquid in the pump can deform or damage the pump.

Viscous liquids such as molasses or oils require a lower pump - ing speed, in extreme cases as low as 200 R.P.M. Consult factory for recommended speeds and increased horsepower requirements.

*Teflon® is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

CAPACITY Water 60°F



Note: Dotted lines(---) recommended for intermittent duty only due to accelerated wear at higher speeds and pressures.

Large suction lines are required to prevent cavitation which can cause pump destruction.

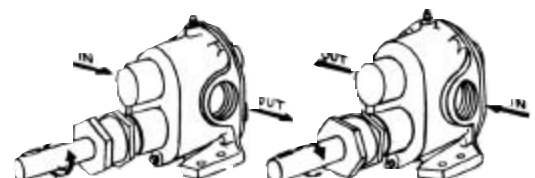
Liquids with specific gravities heavier than water such as dry cleaning fluids require an increase in motor horsepower directly proportional to the increase in specific gravity over water.

SUCTION LIFT

A rotary gear pump is capable of lifting water on the suction side as high as 20 feet. Though gear pumps are self-priming, a foot valve is recommended. For pumping water directly from streams or ponds, a wire mesh strainer must be used at the beginning of the suction line to prevent stones from entering the pump. Strainer and foot valve are commercially available as combination units.

ROTATION

N13510-21

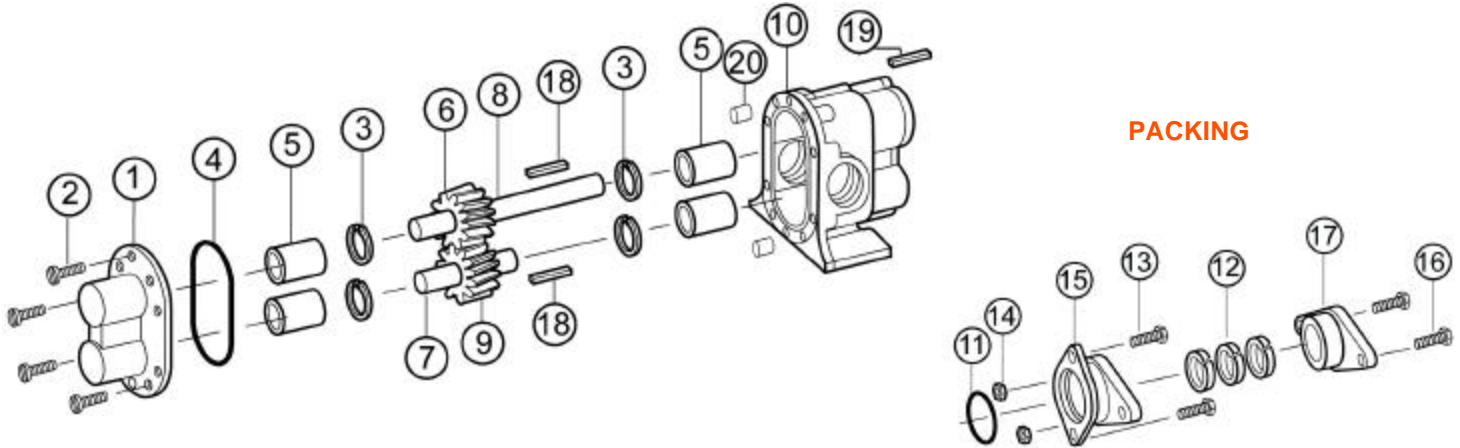


MODELS
N13500-21
N13510-21

BRONZE PEDESTAL ROTARY GEAR PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST

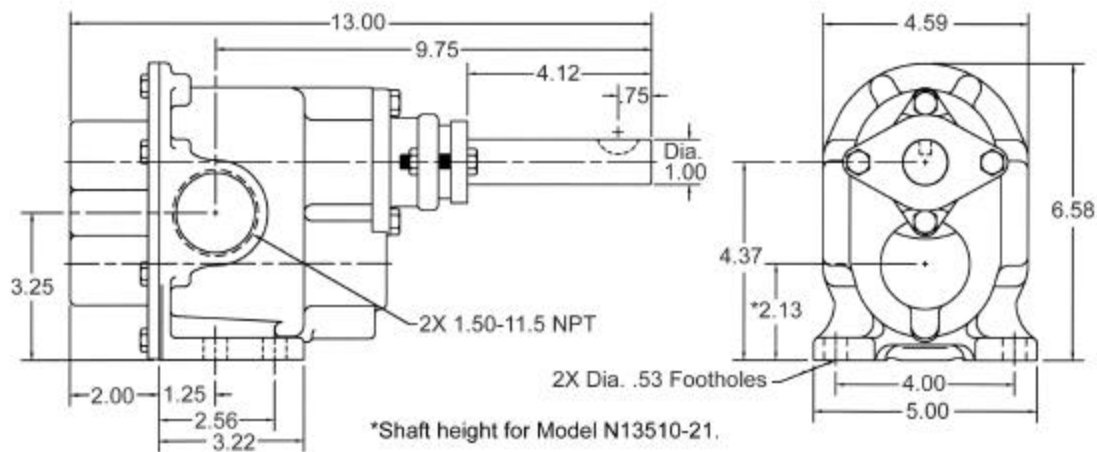


Pump No.	1	2	3 ¹	4 ¹	5 ¹	6 ¹	7 ¹	8 ¹	9 ¹	10
	Cover	Screw	Snap Ring	O-Ring	Bearing	Drive Gear	Idle Shaft	Drive Shaft	Idle Gear	Body
	1 Reqd	8 Reqd	4 Reqd	1 Reqd	4 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
N13500-21	9333NN5N	5393	7651	9797-158	5108	9854	7653	5176	9855	9332NG7N
N13510-21	9333NN5N	5393	7651	9797-158	5108	9854	7653	5176	9855	9332NG8N

Pump No.	11	12 ¹	13	14	15	16	17	18 ¹	19	20	Repair Kit
	O-Ring	Packing	Screw	Nut	Gland	Screw	Seal Adapter	Key	Key	Dowel Pin	
	1 Reqd	3 Reqd	2 Reqd	2 Reqd	1 Reqd	2 Reqd	1 Reqd	2 Reqd	1 Reqd	2 Reqd	
N13500-21	6515	7624	5916	8395	7451	9905	9904	5975	5576	8597	10643
N13510-21	6515	7624	5916	8395	7451	9905	9904	5975	5576	8597	10643

¹ Repair Kits contain items 3,4,5,6,7,8,9,12 and 18.

DIMENSIONS



rev 2/02

Specifications are subject to change without notice.

THERMOPLASTIC SELF PRIMING CENTRIFUGAL PUMPS

MODEL
900

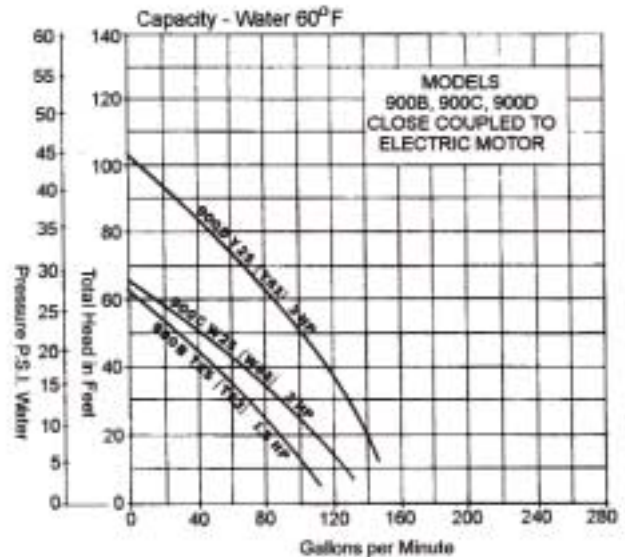


OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

ELECTRIC MOTOR DRIVE
PIPE SIZE 2" INLET AND OUTLET



See model 90P, 91P, 93P for pedestal drive.
See models 900G, 910G, 930G, 940G for
close coupled gas engine drive.



Pump No.	Electric Motor
900B-T25	1 1/2 H.P., 3450 R.P.M., 115V, Single Phase
900B-T63	1 1/2 H.P., 3450 R.P.M., 220/440V, Polyphase
900C-W25	2 H.P., 3450 R.P.M., 115V, Single Phase
900C-W63	2 H.P., 3450 R.P.M., 220/440V, Polyphase
900D-Y25	3 H.P., 3450 R.P.M., 115V, Single Phase
900D-Y63	3 H.P., 3450 R.P.M., 220/440V, Polyphase

SUCTION LIFT AND PRIMING TIMES

2 inch suction line - 3600 R.P.M.

Suction Lift (Feet)	5	10	15	20	25
Priming Time (Seconds)	20	40	60	70	80

- To specify seal made of Vitont & rubber parts of EPDM, add -12 to basic pump numbers. (Example 90P-12). Typical applications include agricultural chemicals.
- To specify rubber Volute liner, add -13 to basic pump numbers (Example 90P-13). Typical applications include dirty liquids.

APPLICATIONS

INDUSTRIAL - CHEMICAL - AGRICULTURE
MARINE - CONTRACTOR - UTILITY

- General Water Supply
- Emergency Stand-by
- Lawn Sprinkling
- Pumping from Underground Tanks
- Industrial Sump Drainage
- Recirculation of Process Liquids
- Dewatering of Ditches, Cellars, Ponds
- Washing Down Barns or Equipment
- Irrigation - Flood Furrow or Sprinkler
- Pumping Cess Pools

TEMPERATURE RANGE: -20°F to 130°F

SPECIAL MODEL DESIGNATIONS

• To specify seal made of Vitont & rubber parts of Viton, add -10 to basic pump numbers. (Example 90P-10). Typical applications include solvents and chemicals.

FEATURES

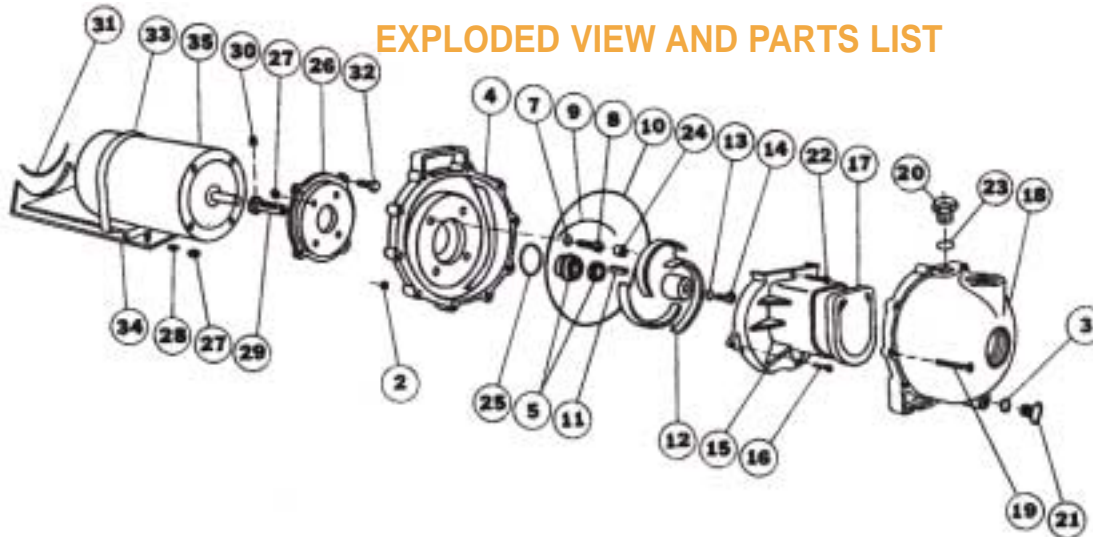
- Mechanical Seals - Ceramic Wearface Mating with Lapped Carbon
- Seal Elastomer Standard is Buna - Also available in Viton and Ethylene Propylene (EPDM)
- Rubber Volute Liner available for dirty liquids
- Built-in Check Valve prevents backflow when pump is shut down
- Self Priming, quiet, efficient, long life
- Tough, Lightweight Thermoplastic Polyester Housings & Impellers for Chemical and Wear Resistance.
- Excellent corrosion resistance to water, acids, & most organic solvents - liquids normally requiring expensive pump liners or stainless steel construction

Note: Viton® is a registered trademark of DuPont Dow Elastomers.

MODEL
900

THERMOPLASTIC SELF PRIMING CENTRIFUGAL PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.



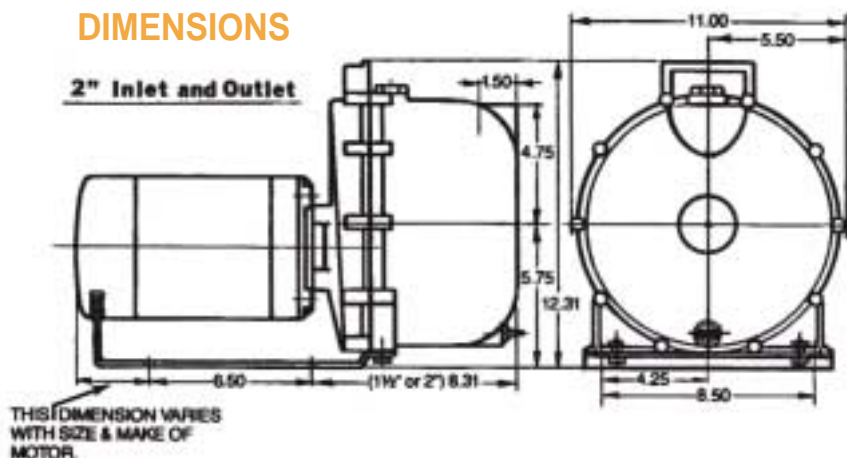
EXPLODED VIEW AND PARTS LIST

Repair Kit No.	Pump No.	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18
		Hex Nut	O-ring	Bracket	Seal Assy.	O-Ring	Screw	O-Ring Segment	O-Ring	Key	Impeller	O-Ring	Screw	Volute	Screw	Check Valve	Body
		10 Req'd	1 Req'd	1 Req'd	1 Req'd	4 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	2 Req'd	1 Req'd	1 Req'd
024-667	900B-T25	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	954-30	725-10	705-71	1002-30
024-667	900B-T63	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	954-30	725-10	705-71	1002-30
024-667	900C-W25	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	954-30	725-10	705-71	1002-30
024-667	900C-W63	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	954-30	725-10	705-71	1002-30
024-704	900D-Y25	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	702-30	725-10	705-71	1002-30
024-704	900D-Y63	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	667-30	717-71	716-10	702-30	725-10	705-71	1002-30

Pump No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
	Screw	Filler Plug	Drain Plug	Volute Screw	O-Ring	Screw Plug	O-Ring	Adapter	Hex Nut	Washer	Shaft Adapter	Set Screw	Rubber Strip	Screw	Strap	Base Plate	Motor
	10 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	6 Req'd	2 Req'd	1 Req'd	2 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd
900B-T25	720-00	722-30	723-30	997-10	765-71	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7538
900B-T63	720-00	722-30	723-30	997-10	765-71	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7541
900C-W25	720-00	722-30	723-30	997-10	765-71	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7539
900C-W63	720-00	722-30	723-30	997-10	765-71	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7542
900D-Y25	720-00	722-30	723-30	771-10	765-71	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7540
900D-Y63	720-00	722-30	723-30	771-10	765-17	750-40	976-71	1010-20	745-00	730-00	1014-90	883-00	874-90	1015-00	934-10	867-01	7543

Note: Repair Kit includes: 5, 7, 9, 11, 12, 13, 14, 16, 22, 23, & 25

DIMENSIONS



7/00

Specifications are subject to change without notice.

THERMOPLASTIC SELF PRIMING CENTRIFUGAL PUMPS

MODELS

900G 930G
910G 940G

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

GAS ENGINE DRIVE

PIPE SIZE: 900G, 910G 2"
930G, 940G 3"



See model 900 for close coupled electric motor drive.
See model 90P, 91P, 93P for pedestal drive.

Pump No.	Engine Drive
900G-UGY	Briggs & Stratton 3 H.P. Model 80232, Type 0721-01 or 0035-01
910G-UGX	Briggs & Stratton 5 H.P. Model 130232, Type 0594-01 or 0036-01
930G-UGX	Briggs & Stratton 5 H.P. Model 130232, Type 0594-01 or 0036-01
940G-UGG	Tecumseh 7 H.P. Model HM 70-132009A

APPLICATIONS

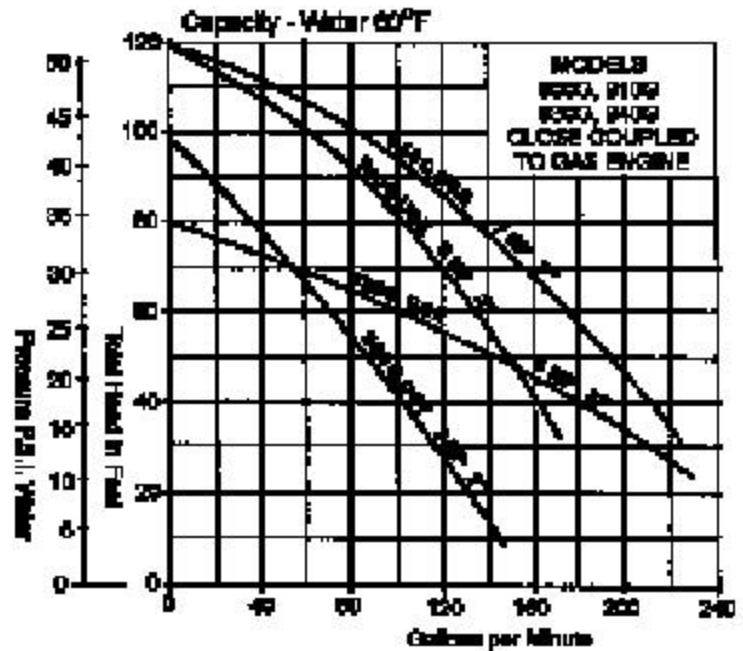
INDUSTRIAL - CHEMICAL - AGRICULTURE

MARINE - CONTRACTOR - UTILITY

- General Water Supply
- Emergency Stand-by
- Lawn Sprinkling
- Pumping from Underground Tanks
- Industrial Sump Drainage
- Recirculation of Process Liquids
- Dewatering of Ditches, Cellars, Ponds
- Washing Down Barns or Equipment
- Irrigation - Flood Furrow or Sprinkler
- Pumping Cess Pools

TEMPERATURE RANGE: -20°F to 130°F

Note: Vitont is a registered trademark of DuPont Dow Elastomers.



SPECIAL MODEL DESIGNATIONS

- To specify seal made of Vitont & rubber parts of Vitont, add -10 to basic pump numbers. (Example 900G-10 UGY). Typical applications include solvents and chemicals.
- To specify seal made of Vitont & rubber parts of Ethylene Propylene (EPDM), add -12 to basic pump numbers. (Example 900G-12 UGY). Typical applications include agricultural chemicals.
- To specify rubber Volute liner, add -13 to basic pump numbers (Example 900G-13 UGY). Typical applications include dirty liquids.

FEATURES

- Tough, lightweight, thermoplastic polyester housings and impellers for chemical and wear resistance.
- Excellent corrosion resistance to water, acids and most organic solvents - liquids normally requiring expensive pump liners or stainless steel construction.
- Quiet, efficient, long life.
- Self priming to 25 feet suction lift in approximately 1 minute depending on pump R.P.M. and altitude.
- Stainless steel fasteners.
- Mechanical seals with ceramic wearface mating with lapped carbon.
- Standard seal elastomer material is Buna - also available in Vitont - also available in EPDM.
- Rubber Volute liner is available for dirty liquids.
- Built in check valve prevents back flow when pump is shut down.

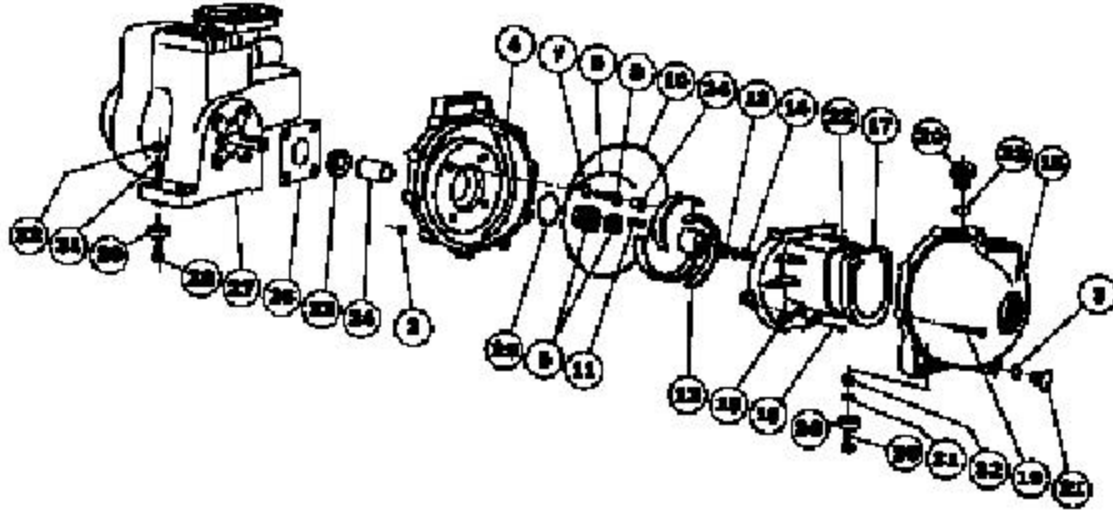
MODELS

900G 930G
910G 940G

THERMOPLASTIC SELF PRIMING CENTRIFUGAL PUMPS

OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

EXPLODED VIEW AND PARTS LIST

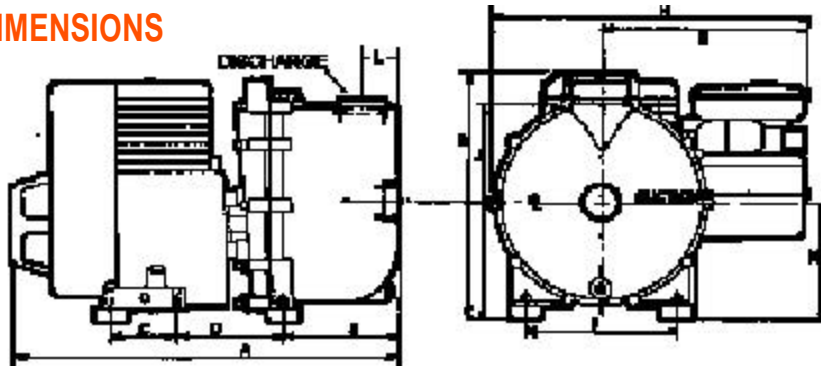


Repair Kit No.*	Pump No.	2	3	4	5	7	8	9	10	11	12	13	14	15	16	17	18
		Hex Nut	O-Ring	Bracket	Seal Assy.	O-Ring	Screw	O-Ring Segment	O-Ring	Key	Impeller	O-Ring	Screw	Volute	Screw	Check Valve	Body
		10 Req'd	1 Req'd	1 Req'd	1 Req'd	4 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	2 Req'd	1 Req'd	1 Req'd
024-704	900G-UGY	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	704-30	717-71	716-10	702-30	725-10	705-71	1002-30
024-706	910G-UGX	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	706-30	717-71	716-10	702-30	725-10	705-71	1002-30
024-975	930G-UGX	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	975-30	717-71	716-10	977-30	725-10	705-71	755-30
024-706	940G-UGG	721-00	1009-71	703-30	714-11	717-71	728-10	754-71	719-71	718-00	706-30	717-71	716-10	702-30	725-10	705-71	755-30

Pump No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	Screw	Filler Plug	Drain Plug	Volute Screw	O-Ring	Screw Plug	O-Ring	Bracket Shim	Engine	Screw	Screw	Rubber Feet	Washer	Hex Nut	Slinger	Shaft Sleeve
	10 Req'd	1 Req'd	1 Req'd	1 Req'd	1 Req'd	4 Req'd	1 Req'd	1 Req'd	1 Req'd	2 Req'd	2 Req'd	4 Req'd	4 Req'd	4 Req'd	1 Req'd	1 Req'd
900G-UGY	720-00	722-30	723-30	771-10	765-71	750-40	976-71	751-90	8090	728-00	729-00	727-90	730-00	731-00	884-71	882-90
910G-UGX	720-00	722-30	723-30	771-10	765-71	750-40	976-71	751-90	8091	728-00	729-00	727-90	730-00	731-00	884-71	882-90
930G-UGX	720-00	722-30	723-30	771-10	765-71	750-40	976-71	751-90	8091	728-00	729-00	727-90	730-00	731-00	884-71	882-90
940G-UGG	720-00	722-30	723-30	771-10	765-71	750-40	976-71	751-90	8360	728-00	729-00	727-90	730-00	731-00	884-71	882-90

*Repair Kit includes 3,5,7,9,11,12,13,14,16,22,23,25 & 26

DIMENSIONS



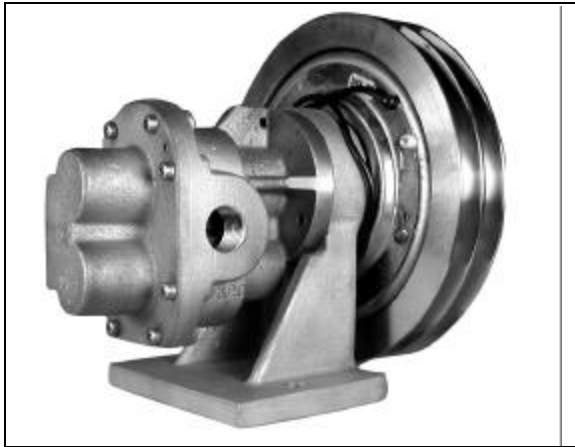
Model	Horsepower	Suction & Discharge	A	B	C	D	E	F	G	H	J	K	L
990G-UGY	3	2" NPT	17.75	12.94	3.13	4.19	5.31	7.31	9.25	14.75	11.13	5.75	1.5
910G-UGX	5	2" NPT	20.75	14.63	3.13	4.19	5.31	7.31	10.25	15.75	11.13	5.75	1.5
930G-UGX	5	3" NPT	20.75	14.63	3.13	4.19	5.31	7.31	10.25	15.75	11.13	5.75	1.95
940G-UGG	7	3" NPT	23.25	15.13	3.13	5.19	5.31	7.31	10.25	17.50	11.13	5.75	1.95

CLUTCH-DRIVEN ROTARY GEAR PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

MODELS
N994-38
N970-38
N990-38



FEATURES

- Bronze Body & Gears, Stainless Shaft
- Self-lubricating Internal Carbon Bearings
- External Ball Bearing for Heavy Duty Belt Drive
- N994-38 has 1/2" NPT Ports
- N970-38 has 3/4" NPT Ports
- N990-38 has 1" NPT Ports

GENERAL DESCRIPTION

Pump housings are made of top quality bronze, shafts are stainless steel 303. Bearings are made of high performance carbon-graphite material selected for wear resistance and long service life. Viton(R)* lip seal is suitable for fuel oils and the external ball bearings are for heavy belt drive loads.

Gear pumps are positive displacement pumps. Each shaft revolution displaces a definite amount of liquid relatively unaffected by the back pressure in the discharge line. Shaft speed and flow are directly proportional.

LIQUIDS AND TEMPERATURE

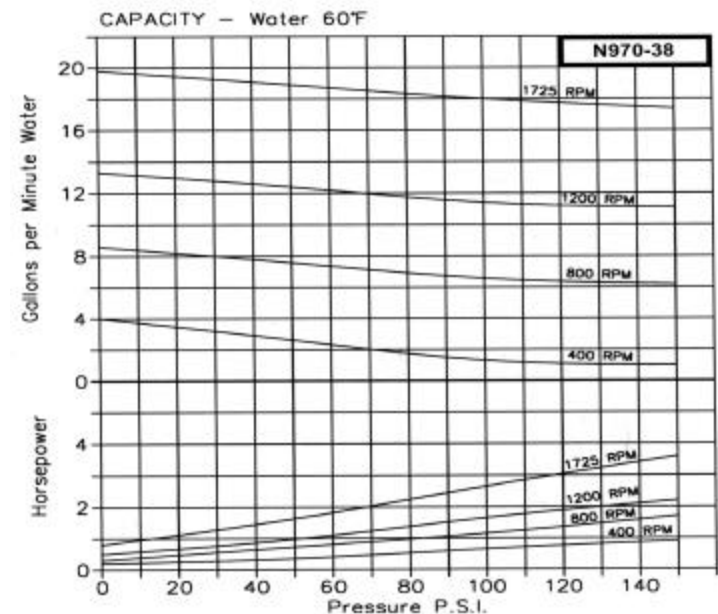
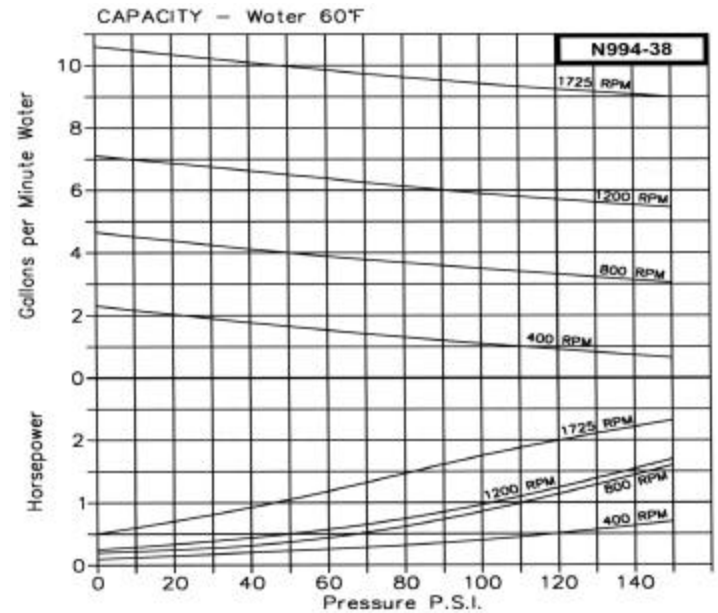
These pumps are suitable for all liquids that are compatible with bronze. Most common liquids are water, oil, and mild chemicals in the pH-range of 4 to 11. Viscous liquids require reduced shaft speeds of 1150 RPM or lower. Consult factory.

Liquids containing solids, abrasives, powders or paint pigments are definitely not recommended for gear pumps. If abrasives are unavoidable, use a very low shaft speed. The recommended liquid temperature range is 32° to 140°F for longest pump life. If more extreme temperature conditions exist, our factory should be consulted. Freezing of water-filled pumps can cause damage and must be avoided. Oils at low temperatures are very viscous requiring a lower speed or extra power.

SUCTION LIFT

As a general rule, the suction lift should be kept at an absolute minimum by placing the pump as close to the liquid as possible. A gear pump in new condition can lift 20 feet of water in the suction line. A foot valve (preferably with a built-in strainer) is recommended at the beginning of the suction line. For a

PERFORMANCE



(Continued on back)

first start-up, the pump should be primed to avoid dry running. Minimum size of the suction pipe is the size of the pump inlet port. For longer suction lines (over 3 feet), or for viscous liquids, the pipe size should be at least one size or two sizes larger than the pump inlet port.

*Viton(R) is a registered trademark of DuPont Dow Elastomers. Viton(R) or equivalent FKM will be used.
Teflon(R) is a registered trademark of DuPont. Teflon(R) or equivalent PTFE will be used.

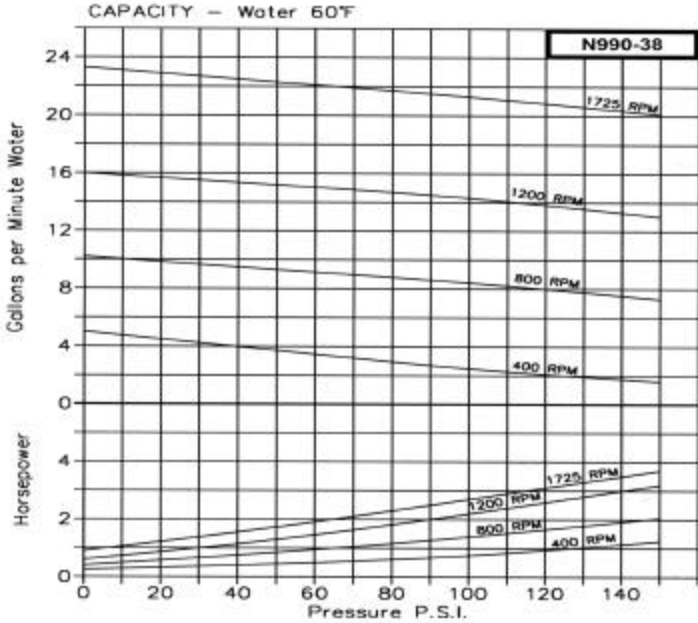
MODELS
N994-38
N970-38
N990-38

CLUTCH-DRIVEN ROTARY GEAR PUMP



OBERDORFER PUMPS
A Subsidiary of Thomas Industries Inc.

PERFORMANCE (continued from front)

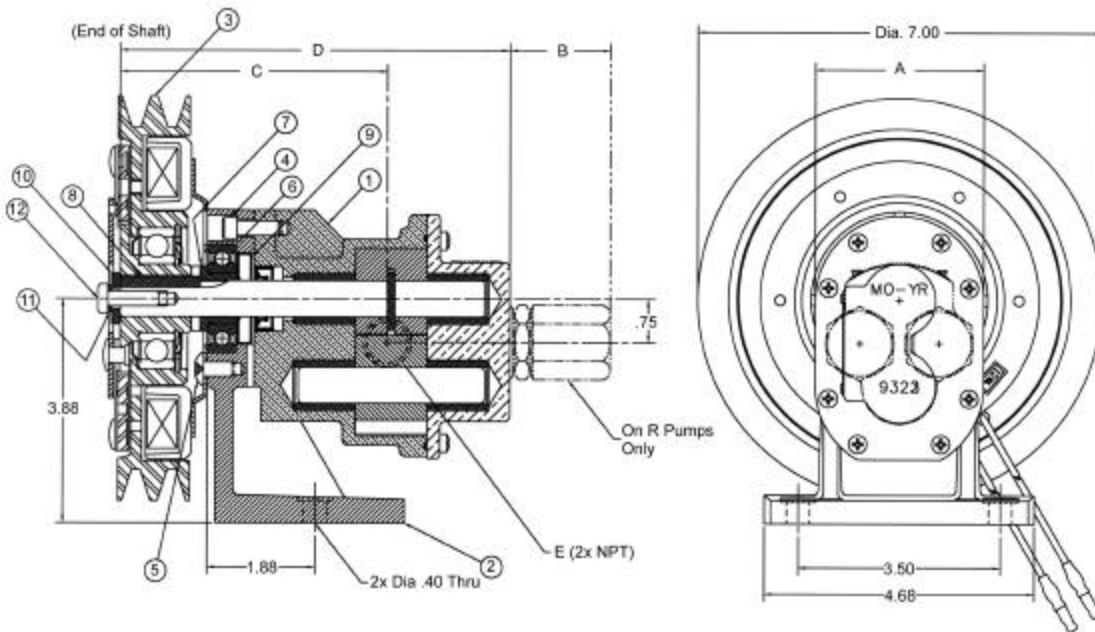


ROTATION AND RELIEF VALVE

The relief valve is not intended to be a metering or flow control device. Its main purpose is to function as a discharge pressure relief when the spring tension is exceeded by the discharge pressure. Overheating can occur within 5-10 minutes if the discharge line is completely shut off for extended periods.

Unless otherwise specified, the clutch driven pump is supplied by the factory for shaft rotation clockwise from shaft end. Reversing the rotation will reverse the "in" and "out" ports and also requires changing the relief valve location. The relief valve is always on the discharge side in this pump series. The factory pressure setting is 50 PSIG. To increase pressure, turn the relief valve adjusting screw in a clockwise direction.

Model	DIM. A	DIM. B	DIM. C	DIM. D	DIM. E (PORT SIZE)
N994-38	2.94	1.75	4.63	6.75	.50-14 NPT (.50-14 BSPT, .75-14 NPT & .75-14 BSPT) ALSO AVAILABLE.
N994R-38	3.00	1.75	4.63	6.75	.75-14 BSPT) ALSO AVAILABLE.
N970-38	3.75	2.00	4.69	6.81	.75-14 NPT (.75-14 BSPT)
N970R-38	3.78	2.00	4.69	6.81	ALSO AVAILABLE
N990-38	3.75	2.00	4.75	7.06	1.00-11.5 NPT (1.00-11.5 BSPT)
N990R-38	3.78	2.00	4.75	7.06	ALSO AVAILABLE



Clutch Driven Pump No.	1	2	3	4	5	6	7	8	9	10	11	12
	Gear Pump No.	Bracket	Clutch w/ coil	Screw	Screw	Ball Bearing	Sleeve	Key	Lipseal Teflon(R)*	Washer	Lock Washer	Screw
	1 Reqd	1 Reqd	1 Reqd	3 Reqd	3 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd	1 Reqd
N994-38	N994-39	2106	9991	6165	6437	5884	2107	7042	6609	6904	5016	7735
N994R-38	N994R-39											
N970-38	N970-39											
N970R-38	N970R-39											
N990-38	N990-39											
N990R-38	N990R-39											

11/00